# Climate

Client Image Management and telecommunications

Software

# Monet®
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- White Paper 41
- Market Uniqueness 47

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Supplemental Information to the Disclosure
See Media Asset Management Report
Supplemental Reference Appendix

- Typical Application Scenario - Amana Beta
- Distributed Documents ver 1.8
  Seybold San Francisco 1996
- Screen Captures - (See Separate Document)
  Ver 1.8 - Completed and disclosed
  Ver 2.5 - Under development and not disclosed

Beta and Technology Partner Non-Disclosure

# Monet®



Title Description: Digital Media Asset Management System

Inventors: Lowell Carlson, Rock, Island IL
John H. Jebens, Tierra Verde, FL
Jeff James, Tampa, FL

Specific Application:

The CLIMATE™ system provides a mechanism to allow corporate clients to archive their digital assets in a central repository either in-house or at a remote central location. Once archived on the CLIMATE™ system, they can be called up for browsing by anyone whom the client has authorized and equipped with a phone modem. Twenty-four hour access makes it easy for designated agencies, printers, and communicators all over the world to locate the images or documents they need and to compose documents or print low resolution files for immediate use. Clients and service providers browse, and print low-re images simultaneously, at multiple locations, while maintaining the consistency and security of the original digital files. Once client images or documents are in the system, they can be easily adapted for a wide variety of applications, such as animation, large format printing, and multi-media presentations or WEB publishing.

The principle benefits gained are the elimination of re-shooting, re-scanning, and re-working digital images or composed documents which have already been digitally re-touched or color corrected.

CLIMATE™ offers a simple menu-driven interface that allows users to locate archived images or documents with key words or catalog numbers. Activity reports can be generated by the user if authorized as well as editing of the data contained with the digital image or document. Integrated hot-foldering and job build and pass round the features of the CLIMATE™ system.

# Monet® Detailed Description



**Index and Brief Description of the Figures:**

Refer to the overall figure and diagram relationship hierarchy following this index for the order in which each is related relative to the processing steps that occur throughout the system.

**Brief Description of the Drawings**

The features of the present invention which are believed to be novel are set forth with particularity in the appended claims. The invention, together which further objects and advantages thereof, may be best understood by reference to the following description taken in conjunction with the accompanying figures.

**Figure and Diagram Hierarchy** is generalized diagram of a specific embodiment of the overall relationship of figures 1 through 4k of an overall digital media asset management system according to the invention.

**Figure 1** is a generalized diagrammatic illustration of a specific embodiment of an overall digital media asset management system according to the invention.

**Figure 2** is a generalized block diagram illustrating one specific embodiment of a digital media asset management system with further detail of each primary component group according to the invention.

**Figure 3a** is a generalized block diagram illustrating a specific embodiment of the overall functional process flow of a digital media asset management system according to the invention.

**Figure 3b** is detailed block diagram illustrating an embodiment of the specific processing function groups relating the operational process flow of a digital media asset management system according to the invention.

**Figure 4** is a detailed block diagram illustrating an embodiment of the overall relationship of figures 4a through 4k which detail specific functions and processes within the digital media asset management system according to the invention.

**Figure 4a** is a flow diagram illustrating the processing methodology and structural flow for input of data files originating by a user for a specific embodiment of the digital media asset management system according to the invention.

**Figure 4b** is a flow diagram illustrating the processing methodology and structural flow for data files received by the host processing system and the disposition of the files' related data for a specific embodiment of the digital media asset management system according to the invention.

**Figure 4c** is a flow diagram illustrating the processing methodology and

structural flow for new file processing, duplicate entry control, and relevant data table updates for a specific embodiment of the digital media asset management system according to the invention.

**Figure 4d** is a diagram illustrating the processing methodology and operational flow of a client-browser user, including key functions and example visual frames (screens) for a specific embodiment of the digital media asset management system according to the invention.

**Figure 4e** is a block diagram illustrating the processing methodology and structural flow all data originating by a client-browser/order user at the host for a specific embodiment of the digital media asset management system according to the invention.

**Figure 4f** is a diagram illustrating the processing methodology and basic data record structure as data is processed to the various tables within the databases contained for a specific embodiment of the digital media asset management system according to the invention.

**Figure 4g** is a diagram illustrating the processing methodology and operational flow of a client-order user, including key functions and example visual frames (screens) for a specific embodiment of the digital media asset management system according to the invention.

**Figure 4h** is a diagram illustrating the processing methodology and operational flow of a service provider user, receiving work orders and files through the automated delivery and distribution processing function for a specific embodiment of the digital media asset management system according to the invention.

**Figure 4i** is a diagram illustrating the administrative processing methodology and functional flow at the host system for a specific embodiment of the digital media asset management system according to the invention.

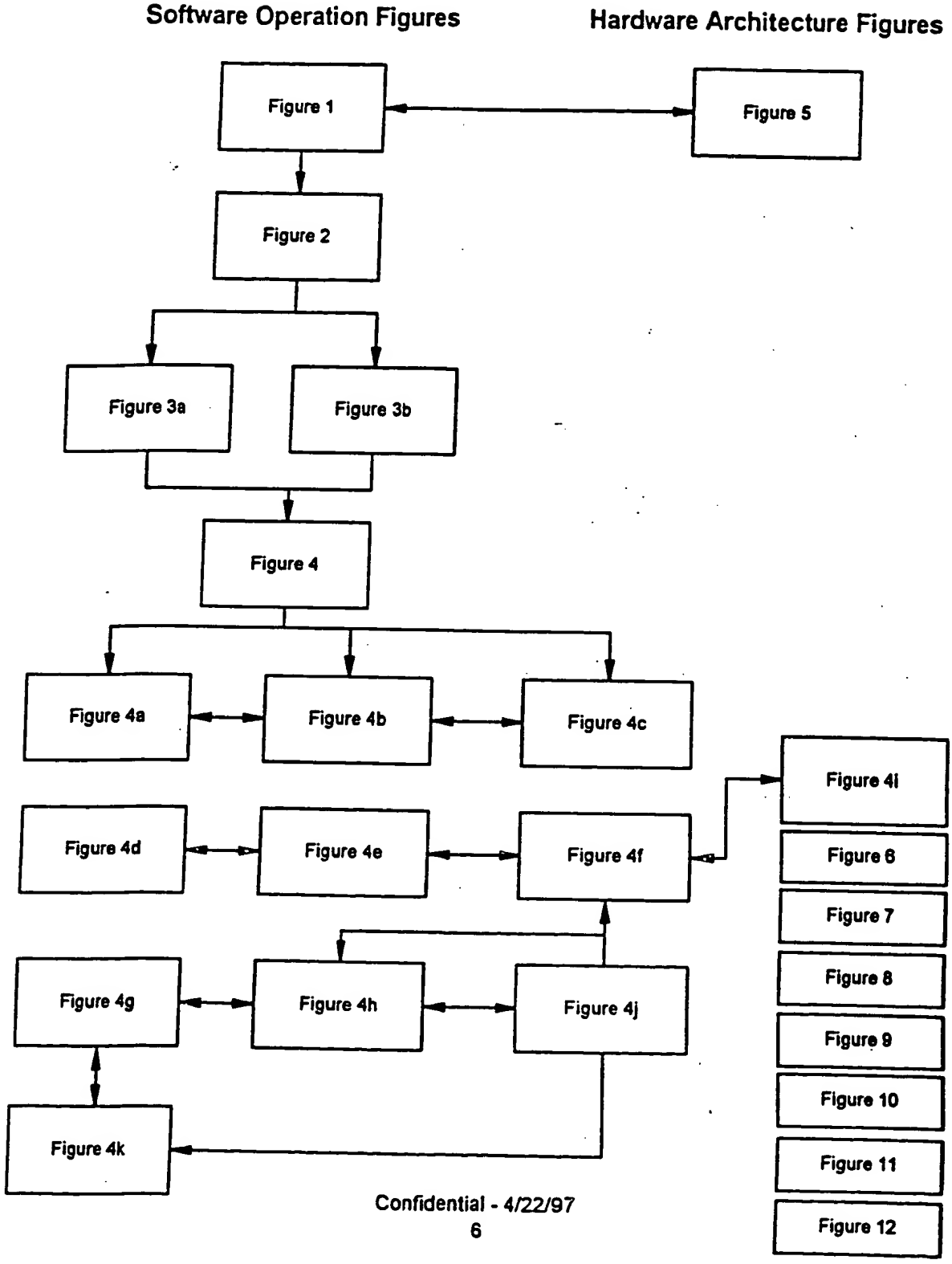
**Figure 4j** is a flow diagram illustrating the processing methodology and functional flow of jobs being received by a service providers computer system, including an example work order visual frame (screen) for a specific embodiment of the digital media asset management system according to the invention.

**Figure 4k** is a diagram illustrating the administrative processing methodology and functional flow at the client user system for a specific embodiment of the digital media asset management system according to the invention.

**Figure 5** is a generalized diagrammatic illustration of the computer and related hardware of a specific embodiment of an overall digital media asset management system according to the invention.

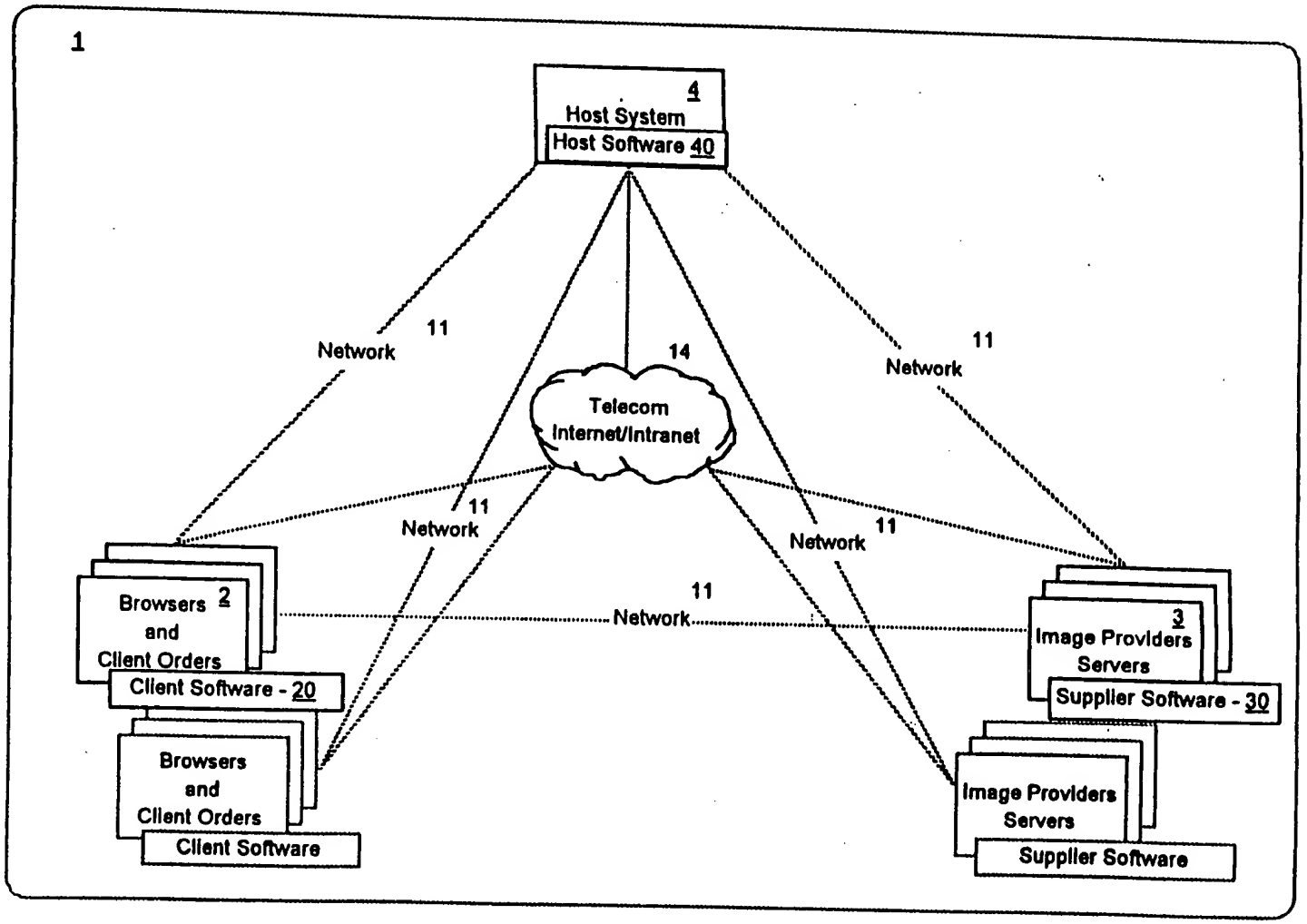
**Figure 6 through 12** are specific example printed output of the various reports and invoices of a specific embodiment of an overall digital media asset management system according to the invention.

# Figure and Diagram Hierarchy



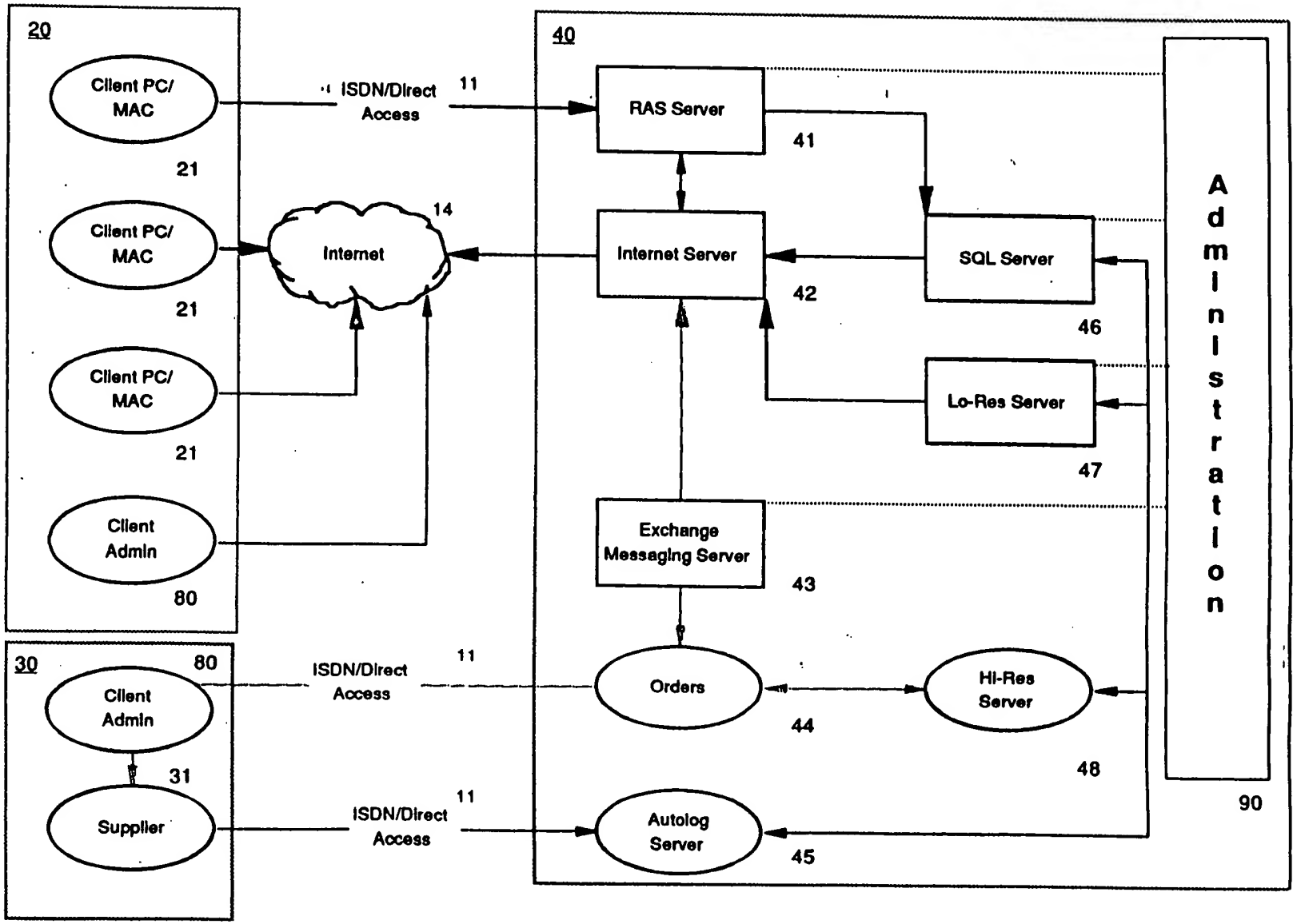
Climate System Block Diagram

## Figure 1



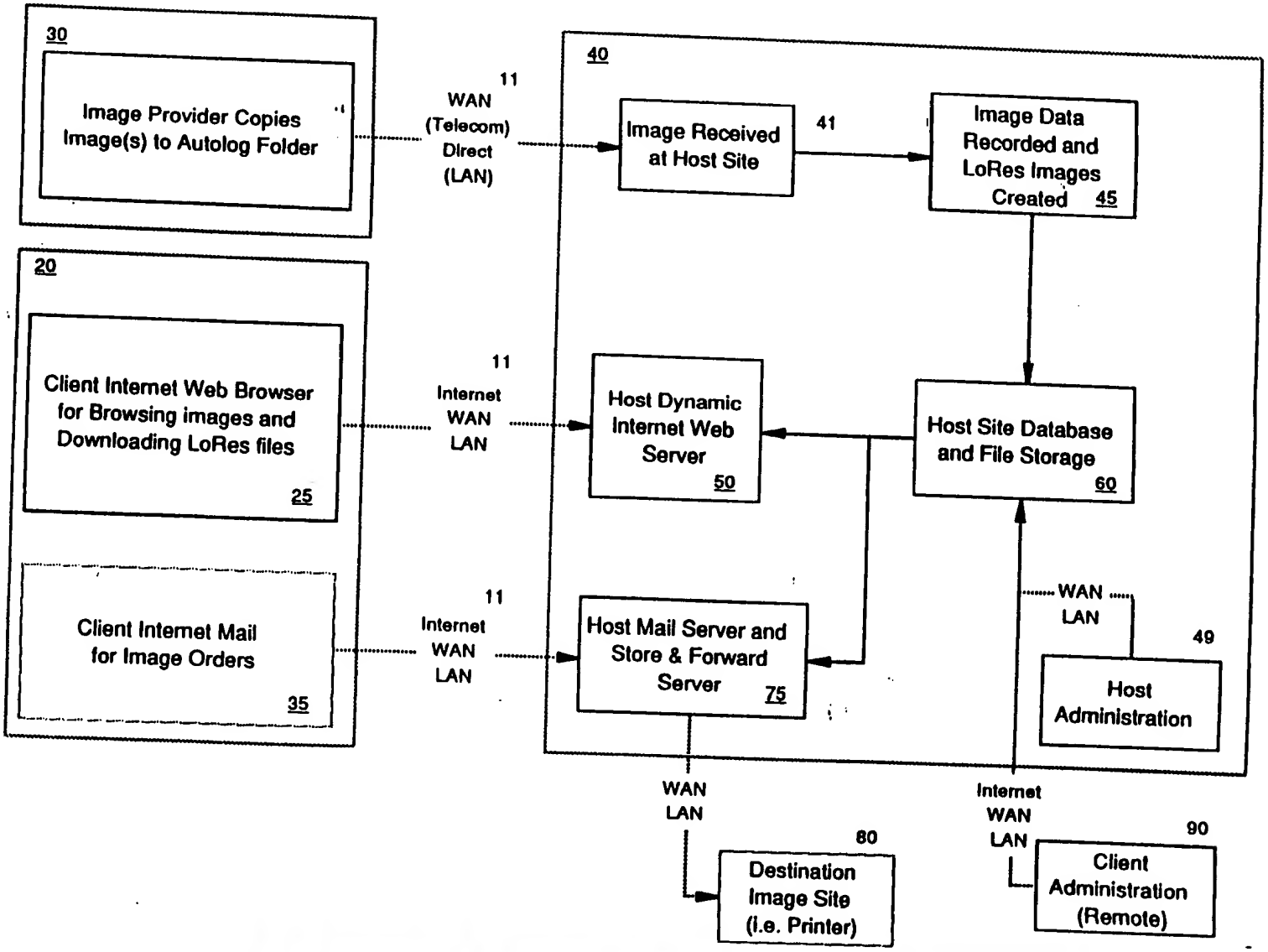
## Climate Overall Architecture Block Diagram

## Figure 2



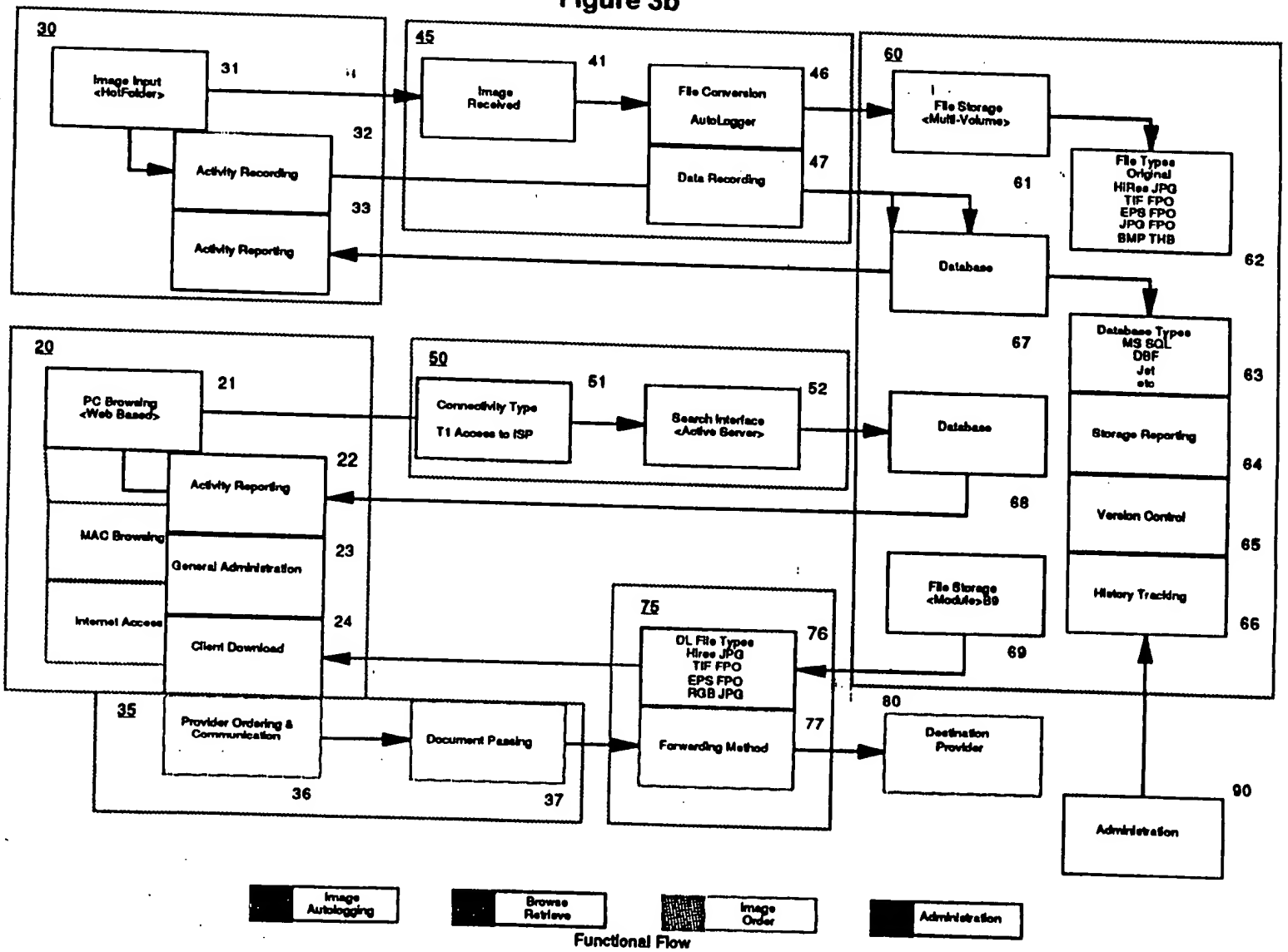
Climate Generalized Processing Block Diagram

Figure 3a

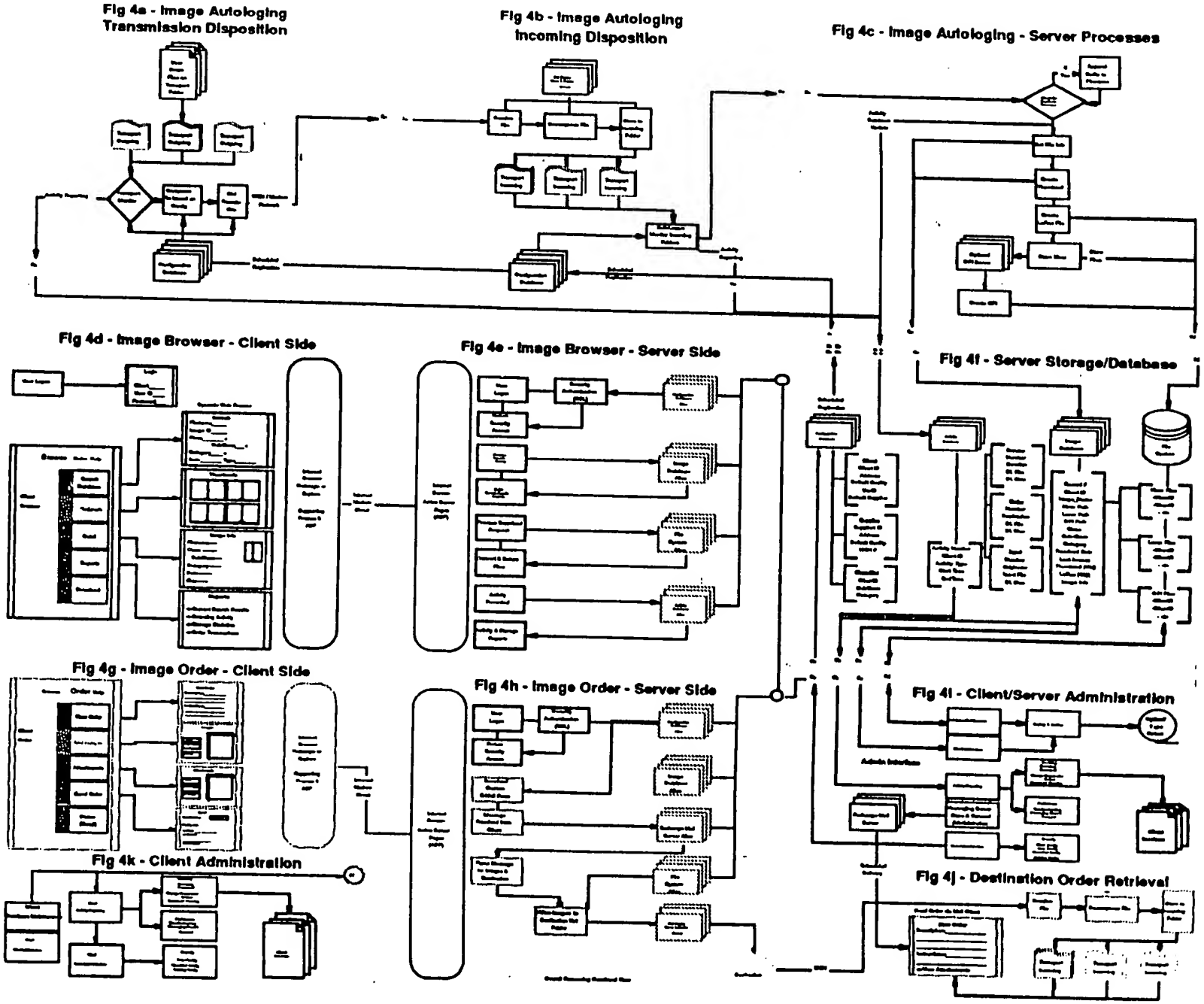



Confidential

## Figure 3b


30
Image Input <HotFolder>
31
32
Activity Recording
33
Activity Reporting
45
Image Received
41
File Conversion AutoLogger
46
Data Recording
47
60
File Storage <Multi-Volume>
61
File Types Original HiRes JPG TIF FPO EPS FPO JPG FPO BMP THB
62
Database
67
Database Types MS SQL DBF Jet etc
63
20
PC Browsing <Web Based>
21
22
Activity Reporting
MAC Browsing
23
General Administration
Internet Access
24
Client Download
50
Connectivity Type T1 Access to ISP
51
Search Interface <Active Server>
52
Database
68
Storage Reporting
64
Version Control
65
History Tracking
66
File Storage <Module>69
69
75
DL File Types Hires JPG TIF FPO EPS FPO RGB JPG
76
Forwarding Method
77
80
Destination Provider
35
Provider Ordering & Communication
36
Document Passing
37
90
Administration
Image Autologging
Browse Retrieve
Image Order
Administration
Functional Flow

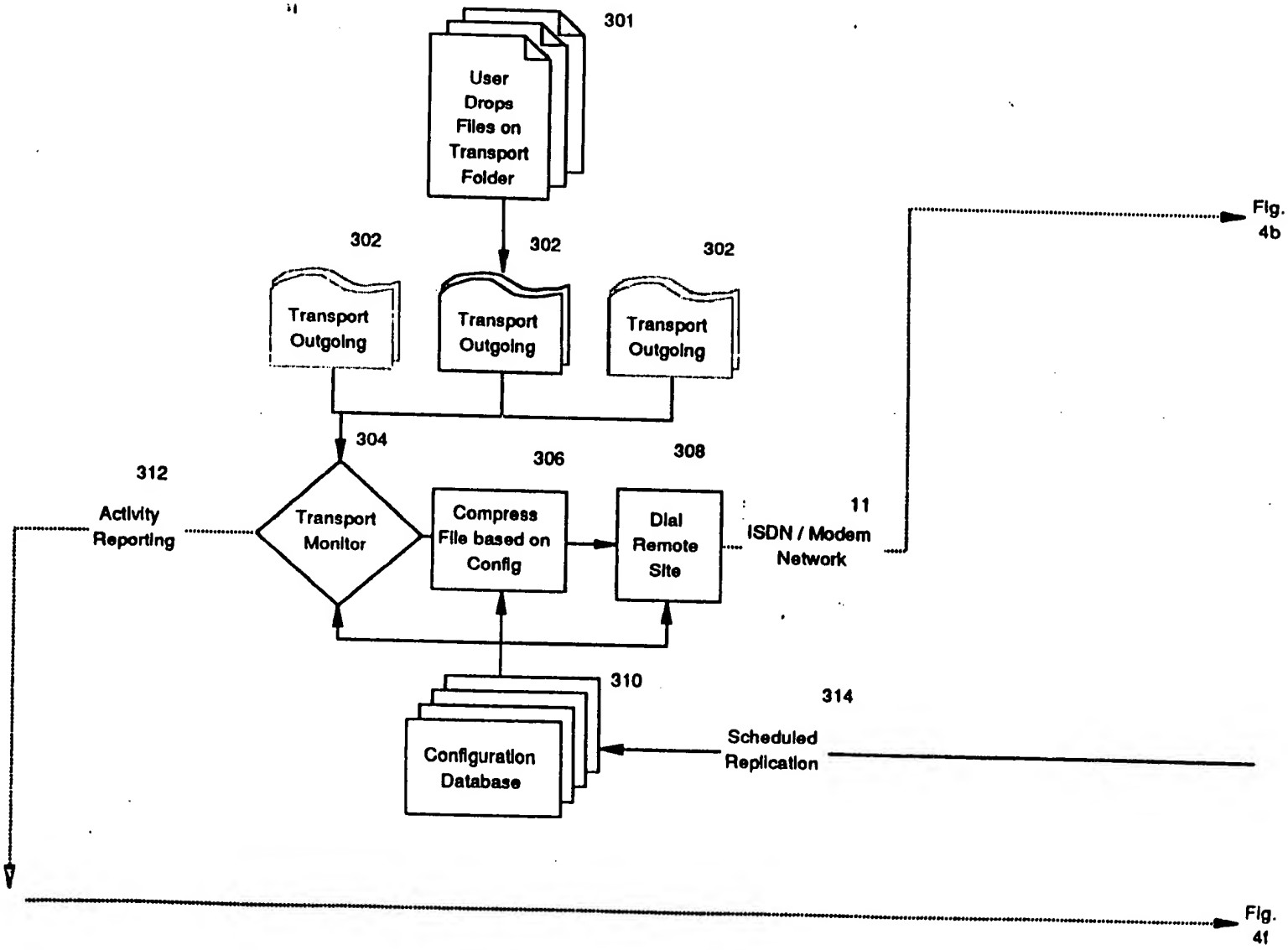
## Figure 4 -Climate Overall Detail Processing Functional Flow




Confidential

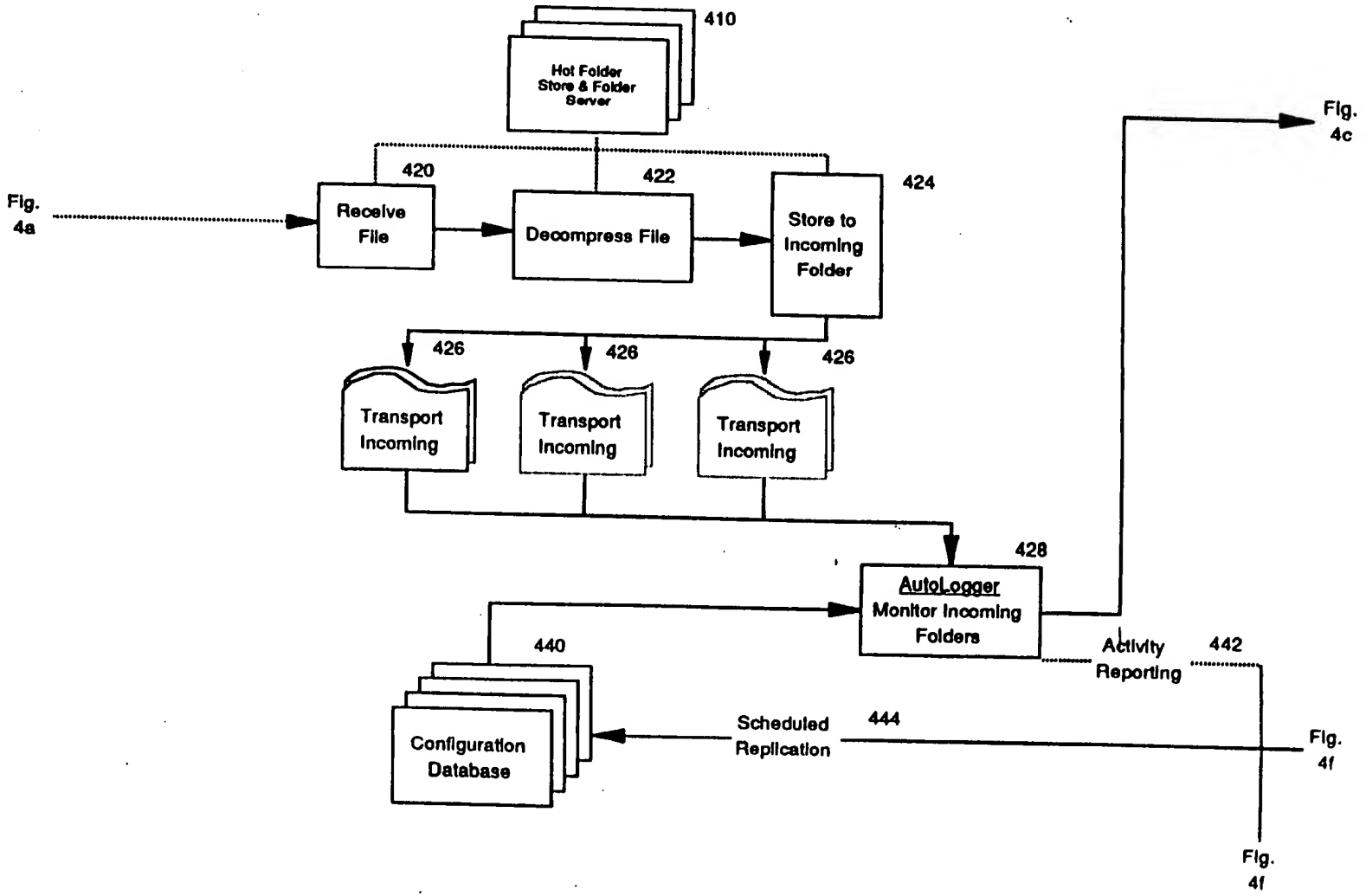
**Climate Specific Processing Functional Flow**
**Image AutoLogging - Transmission**

Figure 4a



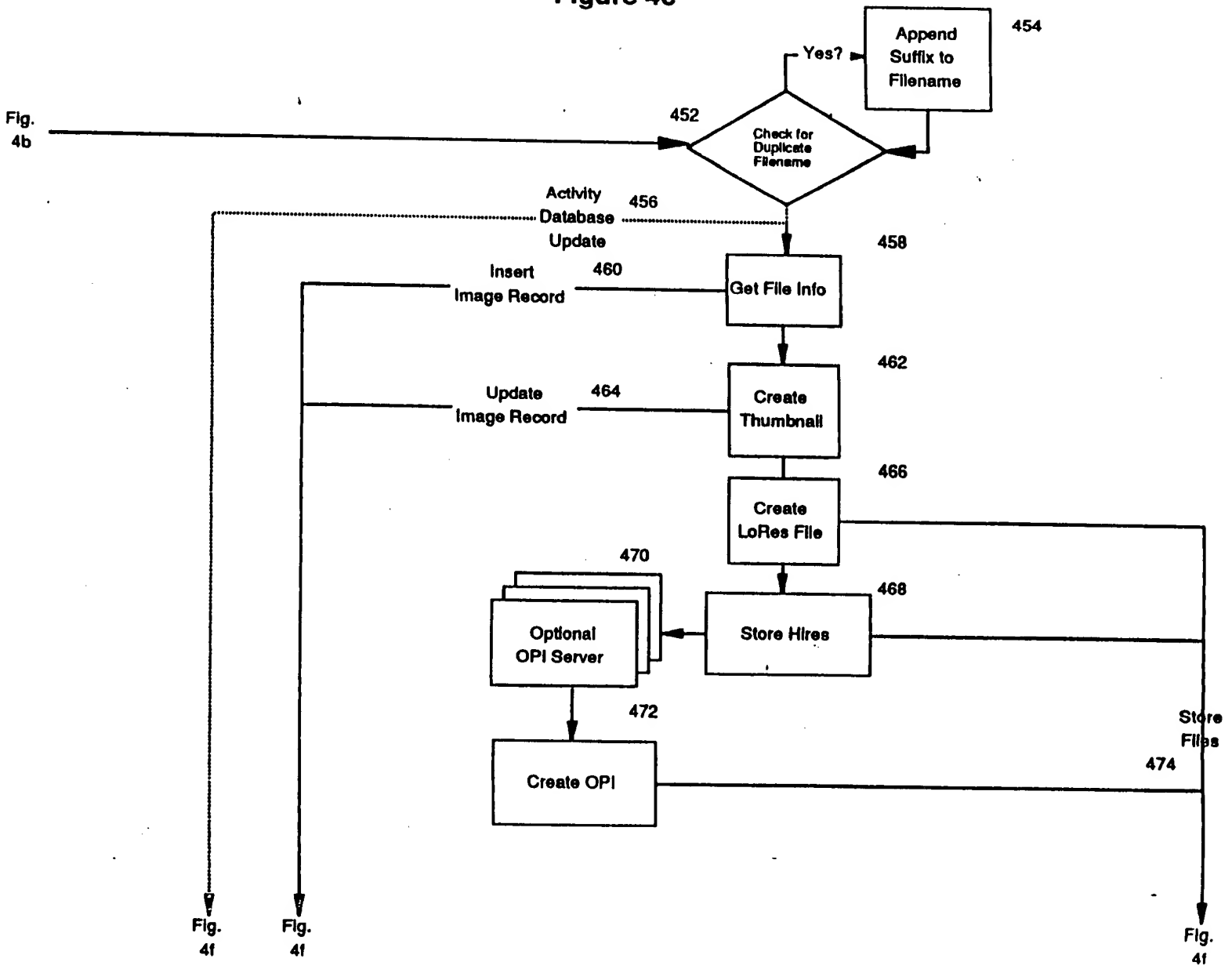
## Climate Specific Processing Functional Flow
## Image AutoLogging - Incoming

## Figure 4b



## Climate Specific Processing Functional Flow
## Image AutoLogging -Server Processes

## Figure 4c



## Climate Specific Processing Functional Flow
## Image Browser - Client Side

## Figure 4d

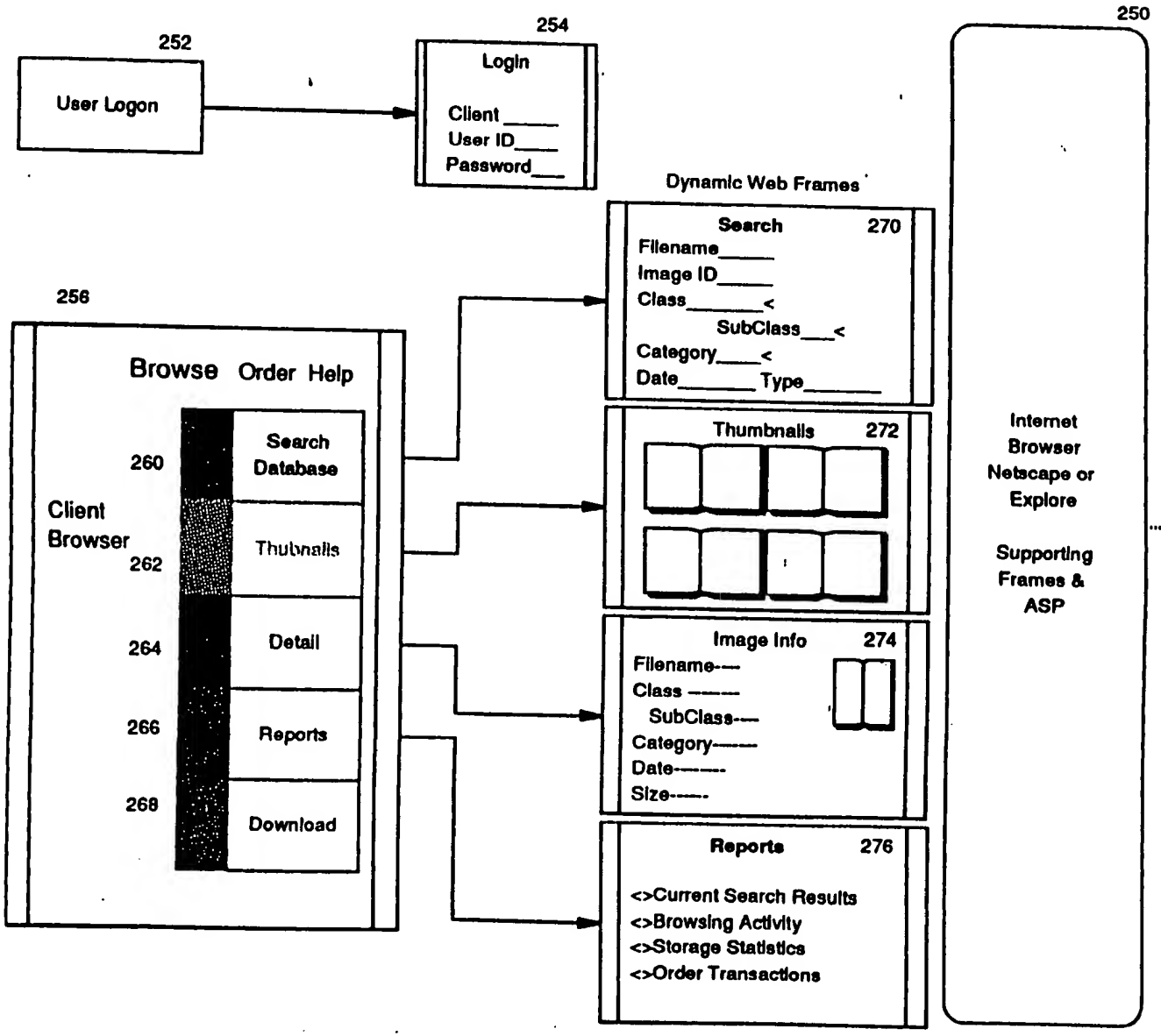
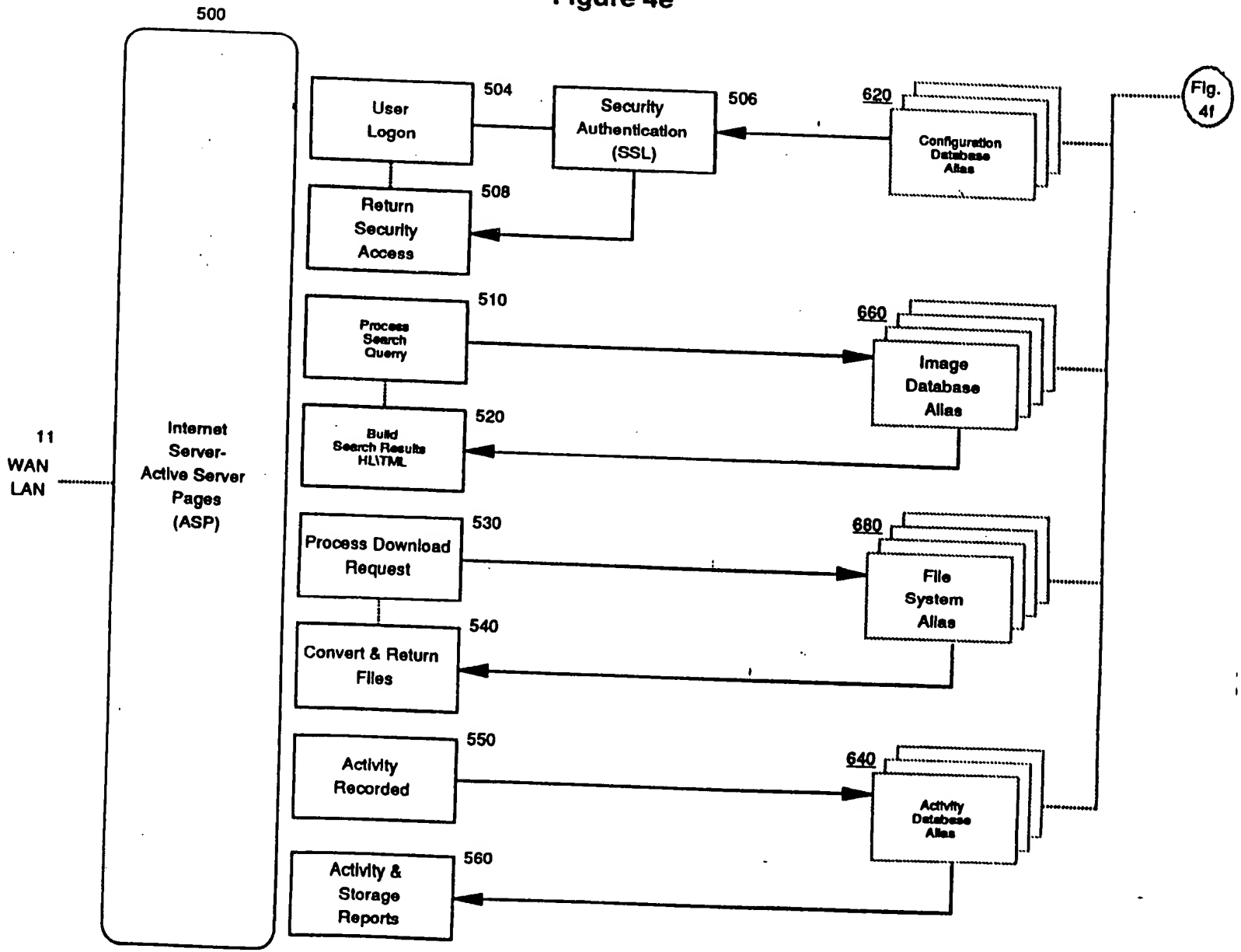



Fig. 4e

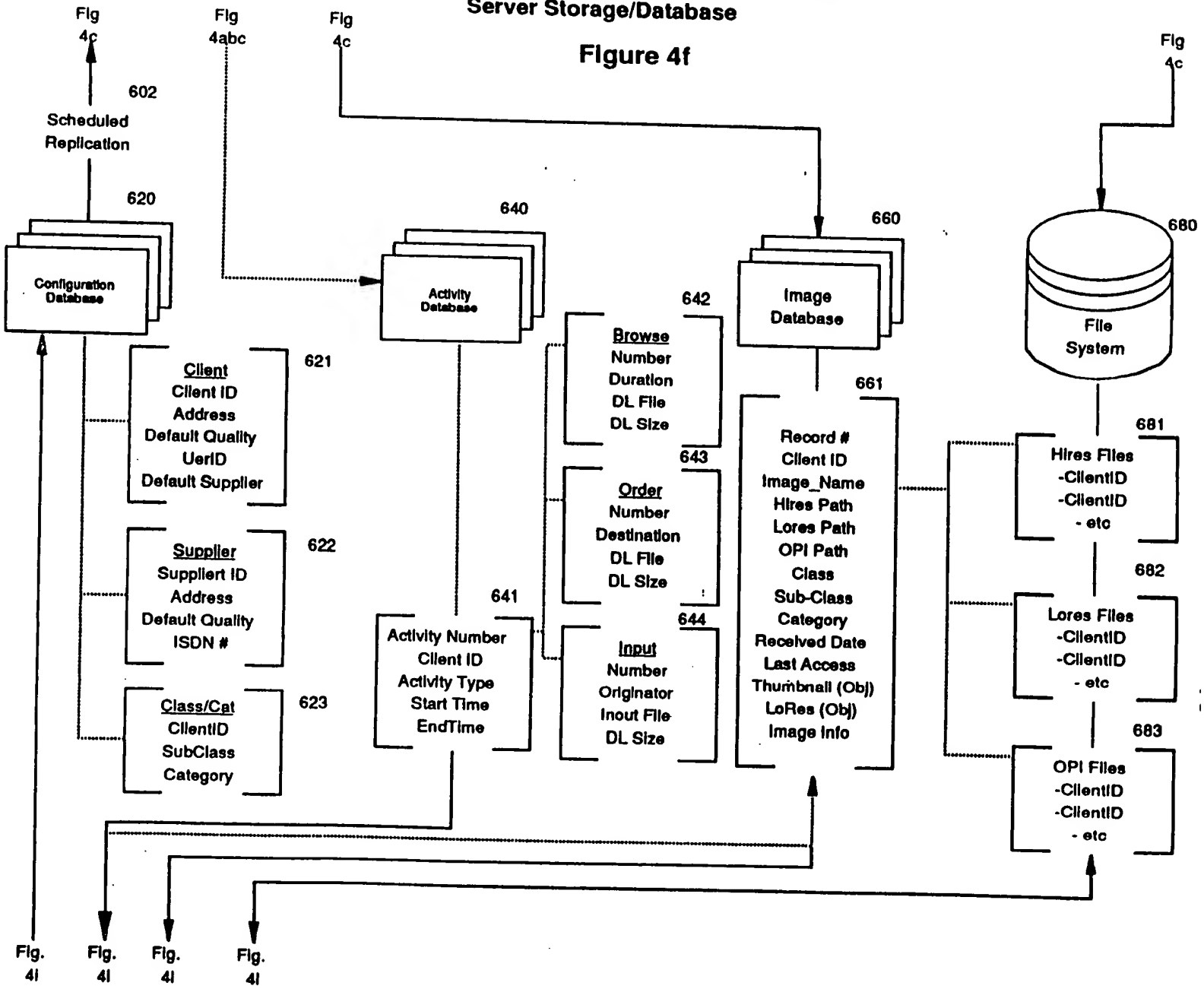
## Climate Specific Processing Functional Flow
## Image Browser - Server Side

## Figure 4e

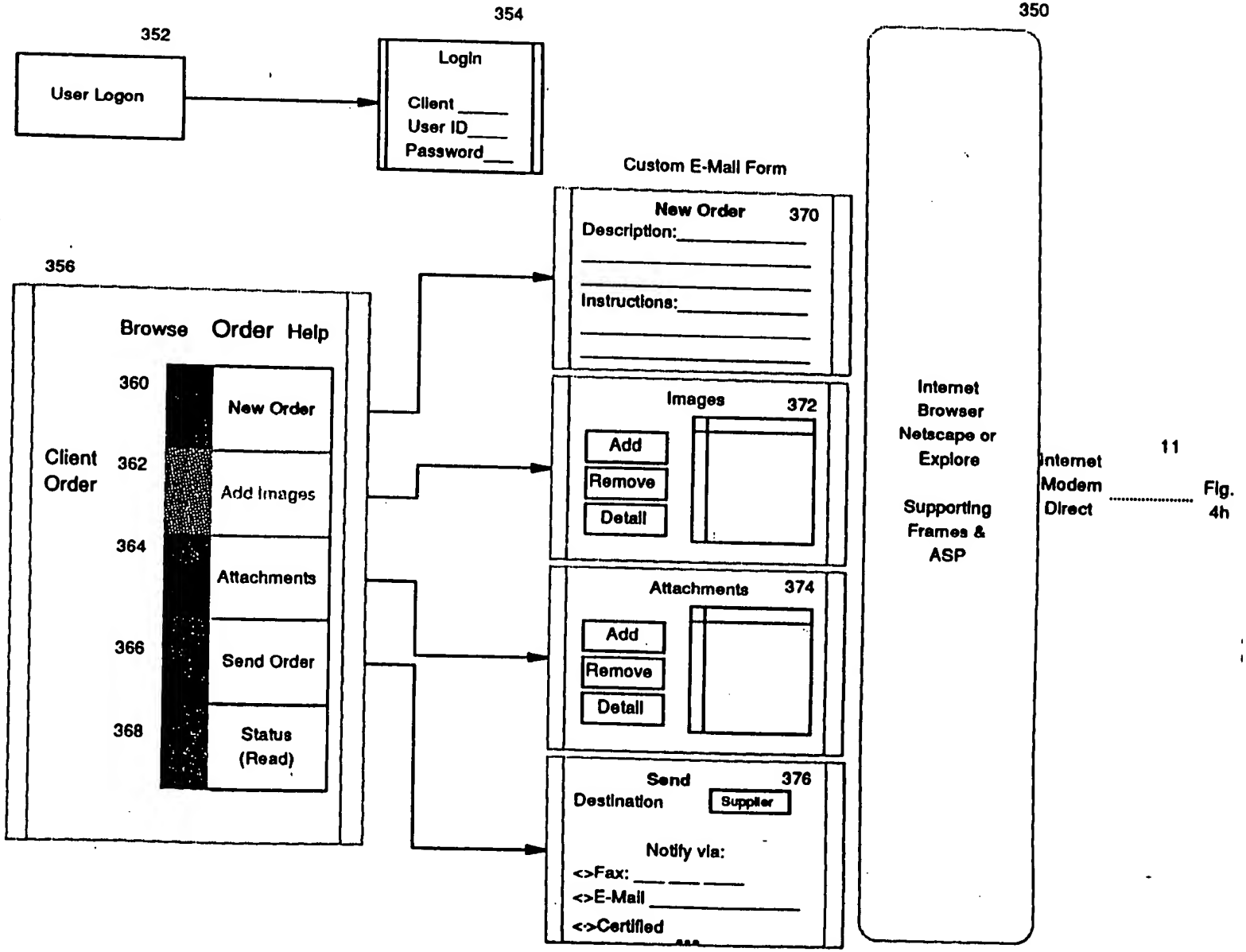


## Climate Specific Processing Functional Flow
## Server Storage/Database

**Figure 4f**



# Climate Specific Processing Functional Flow
## Image Order - Client Side
## Figure 4g



## Climate Specific Processing Functional Flow
## Image Order - Server Side

**Figure 4h**

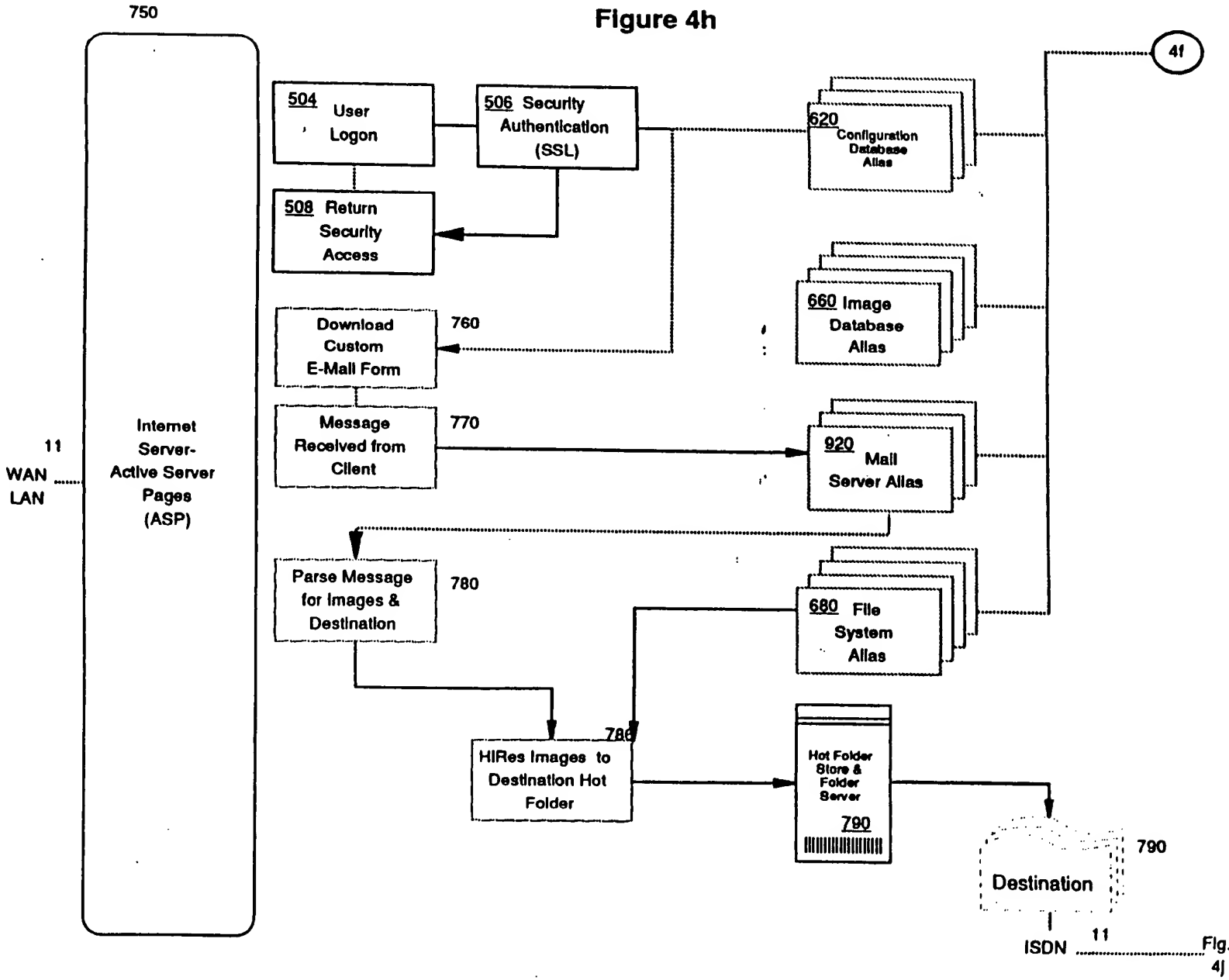
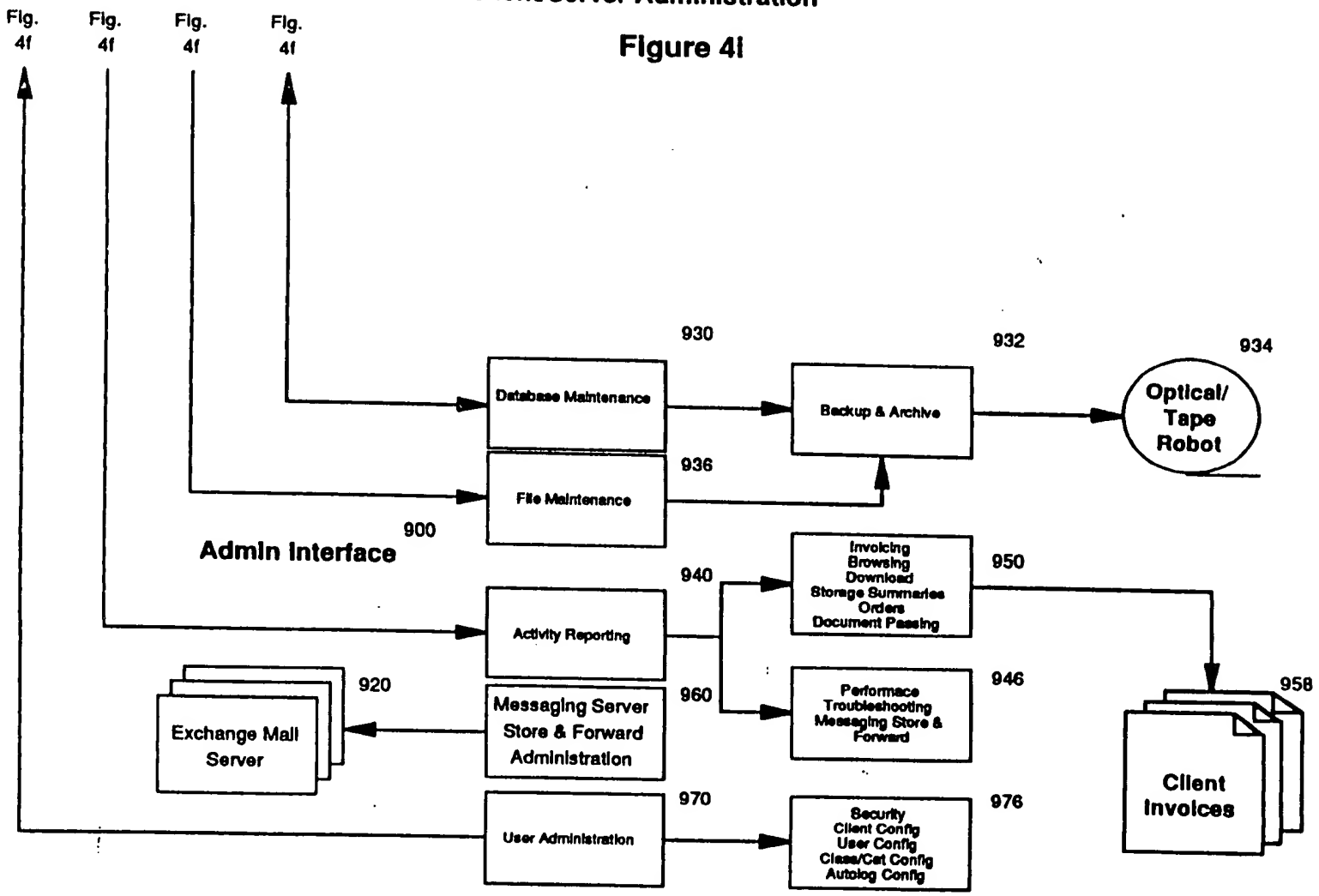



Fig. 4j

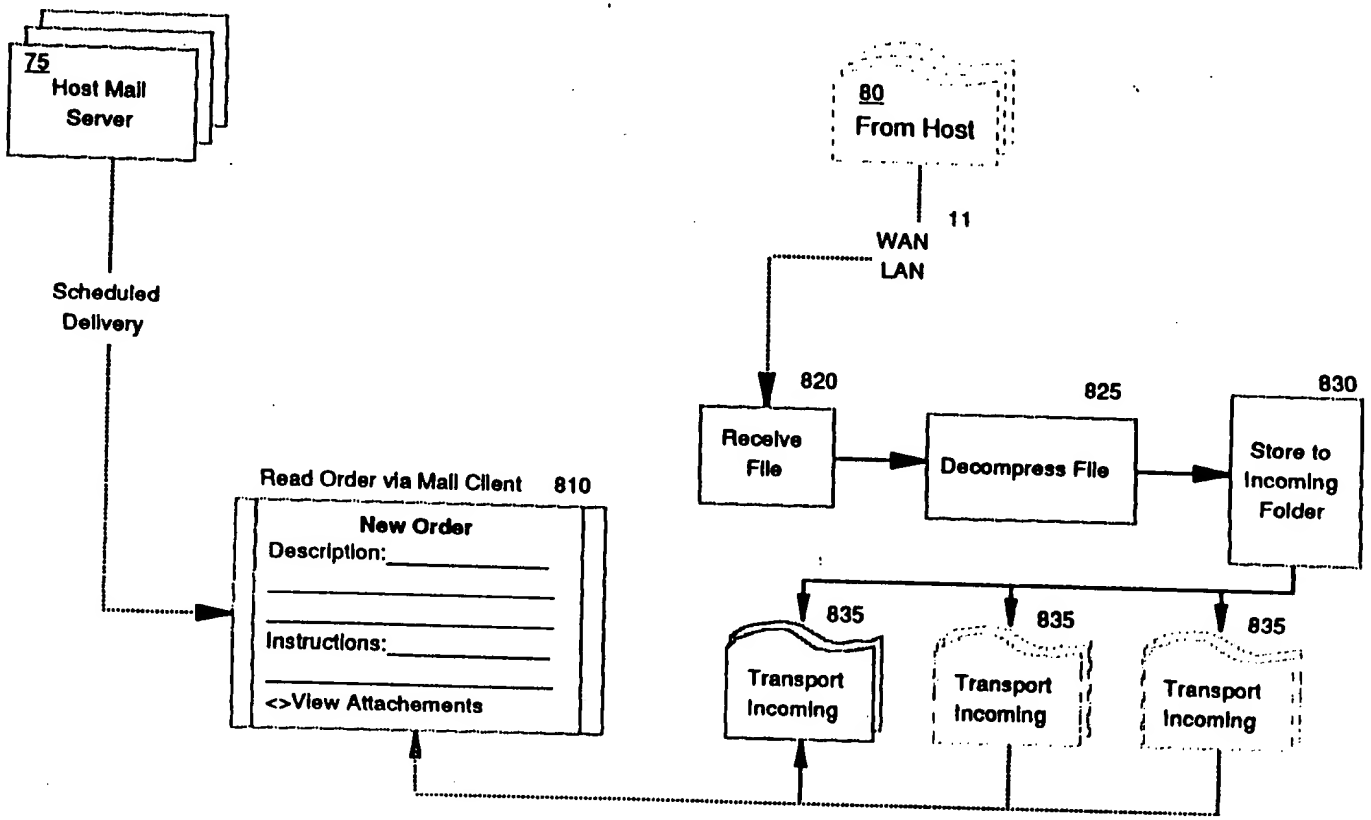
## Climate Specific Processing Functional Flow
## Client/Server Administration

Figure 4i



## Climate Specific Processing Functional Flow
## Image Order Destination Retrieval

## Figure 4j



# Climate Specific Processing Functional Flow
## Client Administration

Figure 4k

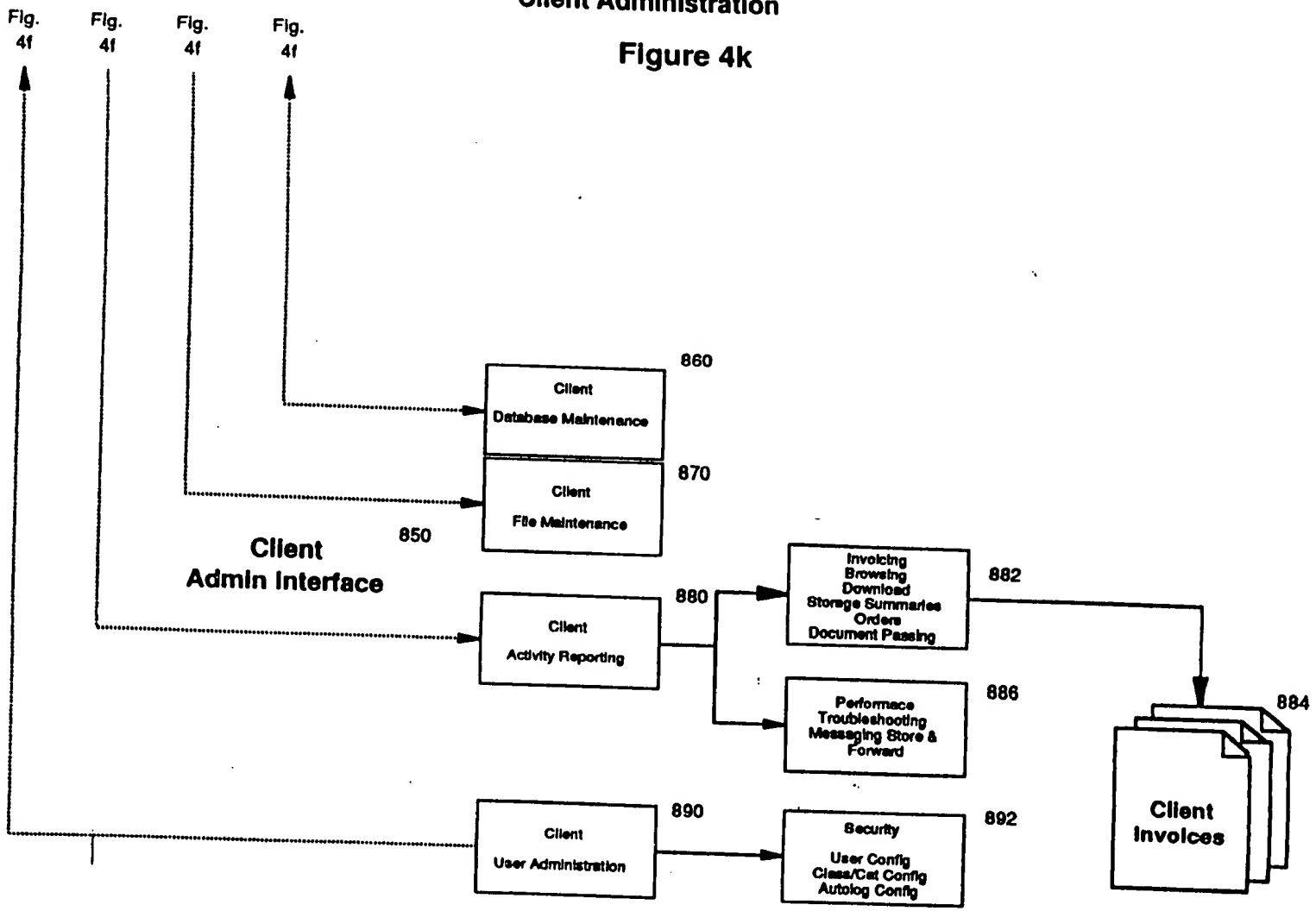


Figure 5

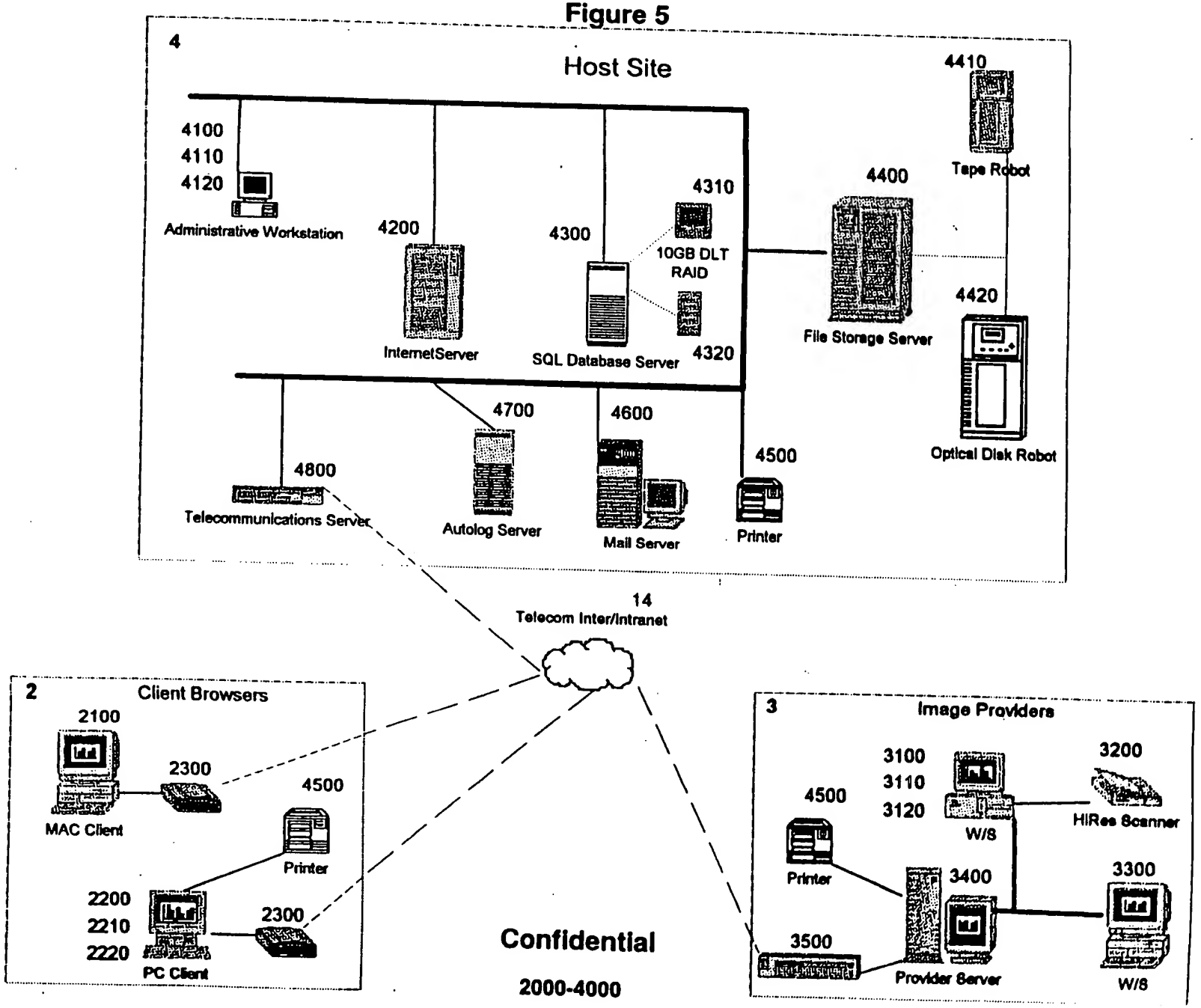

4
Host Site
4100
4110
4120
Administrative Workstation
4200
InternetServer
4300
SQL Database Server
4310
10GB DLT
RAID
4320
4400
File Storage Server
4410
Tape Robot
4420
Optical Disk Robot
4500
Printer
4600
Mail Server
4700
Autolog Server
4800
Telecommunications Server
14
Telecom Inter/Intranet
2
Client Browsers
2100
MAC Client
2300
4500
Printer
2200
2210
2220
PC Client
2300
Confidential
2000-4000
3
Image Providers
3100
3110
3120
W/S
3200
HIRes Scanner
4500
Printer
3400
Provider Server
3300
W/S
3500

Figure 6

23-Apr-97 *Climate Image Browsing Activity Log*

*Client #:* 11111 Monet

*Browsing Transactions* $0.98 per min. $2.60 per OPI DL *1-Nov-96 - 11/30/96*

| *( Reference #)* | | | *Duration (min)* | *TN (file)* | *OPI's (file)* | *Total* |
|---|---|---|---|---|---|---|
| *User:* John Jebens | | ID: 11112 | | | | |
| 100001565 | 11/14/96 4:36:09 P to 4:37:12 PM | | 1.05 | 18 | 0 | 1.03 |
| 100001640 | 11/21/96 11:09:20 A to 11:13:19 AM | | 3.98 | 407 | 0 | 3.90 |
| 100001641 | 11/21/96 11:19:25 A to 11:26:04 AM | | 6.65 | 590 | 0 | 6.52 |
| 100001655 | 11/23/96 1:07:02 P to 1:08:10 PM | | 1.13 | 14 | 0 | 1.11 |
| 100001657 | 11/23/96 1:23:52 P to 1:26:50 PM | | 2.97 | 19 | 0 | 2.91 |
| 100001658 | 11/23/96 2:05:26 P to 2:09:39 PM | | 4.22 | 14 | 0 | 4.13 |
| 100001659 | 11/23/96 2:21:56 P to 2:25:16 PM | | 3.33 | 28 | 0 | 3.27 |
| *Total for User* John | 7 | sessions | 23.33 | 1090 | 0 | $22.87 |

*Ref:BRS 4/23/97/11111/6*

## Figure 7

*23-Apr-97*

### Client Image Storage

| Last Accessed | Image Name | Days in System | Storage Cost/mo | Image Size | JPEG Size | File Type | Resolution Value | Compression Ratio |
|---|---|---|---|---|---|---|---|---|
| **Monet** | | | | | | | | |
| **3/1/97** | | | | | | | | |
| 18-Mar-97 | MO_CODE21.TIF | 110 | $0.34 | 91,941 | 95,221 | Other | 75 | 0.97 |
| 18-Mar-97 | MO_CODEBASETW | 127 | $0.50 | 1,307,820 | 1,307,820 | CYMK | 75 | 1.00 |
| 18-Mar-97 | MO_D423_8.TIF | 335 | $0.33 | 8,624 | 31,885 | CYMK | 100 | 0.27 |
| 20-Mar-97 | MO_RPT_BROWSE- | 96 | $0.35 | 166,242 | 166,242 | RGB | 100 | 1.00 |
| 20-Mar-97 | MO_RPT_BROWSE- | 96 | $0.35 | 138,182 | 138,182 | RGB | 100 | 1.00 |
| 20-Mar-97 | MO_RPT_BROWSE. | 96 | $0.33 | 33,807 | 33,807 | RGB | 100 | 1.00 |
| 20-Mar-97 | MO_RPT_CURRENT | 96 | $0.35 | 154,830 | 154,830 | RGB | 100 | 1.00 |
| 20-Mar-97 | MO_RPT_CURRENT | 96 | $0.34 | 93,538 | 93,538 | RGB | 100 | 1.00 |
| 20-Mar-97 | MO_RPT_STORE-D | 96 | $0.35 | 130,814 | 130,814 | RGB | 100 | 1.00 |
| 20-Mar-97 | MO_RPT_STORE-S | 96 | $0.34 | 106,226 | 106,226 | RGB | 100 | 1.00 |
| 18-Mar-97 | MO_TEST_FILE.TIF | 110 | $0.34 | 795,628 | 40,147 | CYMK | 75 | 19.82 |
| 18-Mar-97 | MO_TEST_FILE_TW | 187 | $0.43 | 804,943 | 804,943 | CYMK | 75 | 1.00 |
| 18-Mar-97 | MO_TEST_ME_AGAI | 198 | $0.55 | 7,449,418 | 1,698,748 | CYMK | 90 | 4.39 |
| 18-Mar-97 | MO_TEST1.TIF | 330 | $0.37 | 283,385 | 283,385 | RGB | 100 | 1.00 |
| 18-Mar-97 | MO_TIFIMAGE.TIF | 327 | $0.40 | 13,113,284 | 569,138 | CYMK | 75 | 23.04 |
| | **Month's Files: 15** | **160** | **$5.69** | **24,678,682** | **5,654,926** | | **91** | **4.36** |
| **1/1/97** | | | | | | | | |
| 09-Jan-97 | DOCUMENT. | 667 | $0.33 | 1,917 | 1,354 | RGB | 90 | 1.42 |
| 17-Jan-97 | MO_ABOUT.TIF | 96 | $0.34 | 66,549 | 66,549 | RGB | 100 | 1.00 |
| 17-Jan-97 | MO_ADVANCED.TIF | 96 | $0.34 | 67,802 | 67,802 | RGB | 100 | 1.00 |
| 17-Jan-97 | MO_AUTO_BUILD.TI | 96 | $0.34 | 70,896 | 70,896 | RGB | 100 | 1.00 |
| 17-Jan-97 | MO_BR-DETAIL-1.TI | 96 | $0.35 | 127,133 | 127,133 | RGB | 100 | 1.00 |
| 17-Jan-97 | MO_BR-DOWNLOA | 96 | $0.35 | 153,975 | 153,975 | RGB | 100 | 1.00 |
| 17-Jan-97 | MO_BR-DOWNLOA | 96 | $0.35 | 152,544 | 152,544 | RGB | 100 | 1.00 |
| 17-Jan-97 | MO_BR-EDIT-1.TIF | 96 | $0.35 | 130,220 | 130,220 | RGB | 100 | 1.00 |
| 17-Jan-97 | MO_BR-EDIT-2.TIF | 96 | $0.35 | 134,231 | 134,231 | RGB | 100 | 1.00 |
| 17-Jan-97 | MO_BR-EDIT-3.TIF | 96 | $0.35 | 148,785 | 148,785 | RGB | 100 | 1.00 |
| 17-Jan-97 | MO_BR-FILENAME. | 96 | $0.35 | 138,340 | 138,340 | RGB | 100 | 1.00 |
| 17-Jan-97 | MO_BR-ORDER-1.TI | 96 | $0.35 | 130,144 | 130,144 | RGB | 100 | 1.00 |

# Figure 8

23-Apr-97 *Climate Image Storage and Activity Log*

*Client #:* 11111 Monet

*Storage Transactions* $0.33 per file+ $0.13 per MB *1-Nov-96 - 11/30/96*

| *Last Access* | *Files Accessed* | *Total Size (MB)* | *Fixed File Cost* | *MB Cost* | *Storage Cost* |
|---|---|---|---|---|---|
| 1 Month(s) Ago | 5 | 3.388 | 1.65 | 0.44 | $2.09 |
| 3 Month(s) Ago | 2 | 1.309 | 0.66 | 0.17 | $0.83 |
| 4 Month(s) Ago | 1 | 9.159 | 0.33 | 1.19 | $1.52 |
| 6 Month(s) Ago | 1 | 0.001 | 0.33 | 0.00 | $0.33 |
| *Storage Summary for:* | | | | | $4.77 |

Monet

*Client #:* 11111

| *Files in Storage* | *HIRes Size* | *JPEG Size* | *Fixed File* | *MB Cost* | *Storage Cost* |
|---|---|---|---|---|---|
| 9 | 32.130 | 13.857 | 2.97 | 1.80 | $4.77 |
| Avg File | 3.570 | 1.540 | 0.33 | 0.20 | $0.53 |

*Provider's Discount*

*Storage Transactions* $0.330 per file+ $0.130 per MB

| *Files in Storage* | *HIRes Size* | *JPEG Size* | *Fixed File* | *MB Cost* | *Storage Cost* |
|---|---|---|---|---|---|
| 9 | 32.130 | 13.857 | 2.97 | 1.80 | $4.77 |

*Ref:STR 4/23/97/11111/1*

# Figure 9

23-Apr-97 **Climate New Image Entry Activity Log**

*Client #:* 11111 Monet *Librarian:* Jeff

*Image Entry Transactions* $0.75 per file+ $0.50 per MB *01-Nov-96 to 30-Nov-96*

| *Input by:* Monet | | | *HiRes (MB)* | *JPEG (MB)* | *Total ($)* |
|---|---|---|---|---|---|
| *Reference #* | | *Image Name* | | | |
| 1000000997 | 11/15/96 12:51:00 PM | MO_PLSDMVP.TIF | 1.308 | 1.308 | 1.40 |
| | Monet | 1 new files entered | 1.308 | 1.308 | $1.40 |

| *Image Entry Transactions Summary for:* | | *HiRes (MB)* | *JPEG (MB)* | *Total* |
|---|---|---|---|---|
| Monet | 1 new files entered | 1.308 | 1.308 | $1.40 |
| *Client #:* 11111 | *Compression Ratio* | | *Average* | |
| | 1.00 | 1.308 | 1.308 | $1.40 |

*RefIDF 4/23/97/11111/1*

## Figure 10

*23-Apr-97* **Climate Image Ordering Activity Log**

*Client #:* 11111 **Monet**

*Order Transactions* $6.00 per file 1.00 per MB *1/1/97 - 1/31/97*

| *( Reference #)* | | *Image Name (Documents)* | *Size (bytes)* | *Transmit Size (MB)* | *Total* |
|---|---|---|---|---|---|
| ***User:*** **Jeff** | **James** | **ID: 11111** | | | |
| 100000265 | 1/9/97 | MO_CODEBASETWO.TIF | 1,307,820 | 1.308 | $7.31 |
| | | MO_TEST1.TIF | 283,385 | 0.283 | $6.28 |
| ***Destination:*** 11111 | ***Documents:*** | | | | |
| 100000275 | 1/10/97 | MO_TIFIMAGE.TIF | 13,113,284 | 0.569 | $6.57 |
| | | MO_D423_8.TIF | 8,624 | 0.032 | $6.03 |
| | | MO_CODEBASETWO.TIF | 1,307,820 | 1.308 | $7.31 |
| ***Destination:*** 11111 | ***Documents:*** | ERRORS.TXT | 1,675,432 | | |
| ***Total for User*** **Jeff** | | **5 sessions** | **5 files** | 3.500 | $33.50 |

*Ref:BRS 4/23/97/1:111/i*

Figure 11

*23-Apr-97* *Climate Purged Image Storage Log*

*Client #:* 11111 Monet

*Storage Transactions* $0.33 per file+ $0.13 per MB *1-Jan-97 - 1/31/97*

| *Date Purged* | *Files Purged* | *Total Size (MB)* | *Fixed File Cost* | *MB Cost* | *Storage Cost* |
|---|---|---|---|---|---|
| Tuesday, January 07, 1997 | 1 | 0.080 | 0.33 | 0.01 | $0.34 |
| Wednesday, January 08, 1997 | 5 | 18.756 | 1.65 | 2.44 | $4.09 |
| *Purged Storage Summary for:* | | | | | $4.43 |

Monet

*Client #:* 11111

| *Files In Purge* | *HiRes Size* | *JPEG Size* | *Fixed File* | *MB Cost* | *Storage Cost* |
|---|---|---|---|---|---|
| 6 | 48.798 | 18.837 | 1.98 | 2.45 | $4.43 |
| Avg File | 8.133 | 3.139 | 0.33 | 0.41 | $0.74 |

*Provider's Discount*

*Storage Transactions* $0.330 per file+ $0.130 per MB

| *Files In Purge* | *HiRes Size* | *JPEG Size* | *Fixed File* | *MB Cost* | *Storage Cost* |
|---|---|---|---|---|---|
| 6 | 48.798 | 18.837 | 1.98 | 2.45 | $4.43 |

*Ref:PRG 4/23/97/11111/1*

Figure 12


## *Monet, Inc*

*Managing Your Good Impressions*
4511 North Himes Avenue Suite 285
Tampa, Forida 33614

email: monetjj@ix.netcom.com
Tel: 813-870-3300 Fax: 813-870-3203


# INVOICE

**INVOICE NO: MO97-113**
**DATE: 23-April-97**

**To:** QUANTECH
1929 E. 10th Ave.
Milan, IL 61264

800-728-3241 Fax: 309-787-8329
Contact: Mike Randoni
email: qti@quantech.com

**Ship To:** Monet
4511 N Himes
Suite 285
TAMPA, FL 33614

813-870-3300 Fax: 813-870-3203
Contact: Jeff

PROJECT: Digital Image Library Charges for Monet

| SALESPERSON | P.O. NUMBER | PERIOD | DISCOUNTED | F.O.B. POINT | TERMS |
|---|---|---|---|---|---|
| JHJ | MO1196 | 11/1/96 to 11/30/96 | 0.00% | N/A | Net 30 |

| QUANTITY | DESCRIPTION | | | UNIT PRICE | AMOUNT |
|---|---|---|---|---|---|
| 1 | Storage Charges ** | 13.857 mb (9 files) | @ (.33/file - .13/mb) | 4.77 | 4.77 |
| 1 | Browsing Charges | 622.9 minutes | @ (.98/minute) | 610.49 | 610.49 |
| 1 | OPI Charges | 4 images | @(2.60/download ) | 10.40 | 10.40 |
| 1 | Orders Charges | 7.6 mb (33 files) | @(6.00/file - 1.00/mb) | 205.64 | 205.64 |
| 1 | Document Transfers | 1.694 mb (37 files) | @(2.00/file - 1.50/mb) | 76.54 | 76.54 |
| 1 | Image Input | 1.3 mb (1 files) | @(.75/file - .50/mb) | 1.40 | 1.40 |
| 1.00 | Administration | | @(150.00 per hour) | 150.00 | 150.00 |
| 0 | Miscellaneous | | | | 0.00 |
| | | | | SUBTOTAL | 1059.24 |
| | | | | 7.00% VAT | 74.15 |
| | | | | SHIPPING & HANDLING | 0.00 |
| | | | | TOTAL DUE | $1,133.39 |

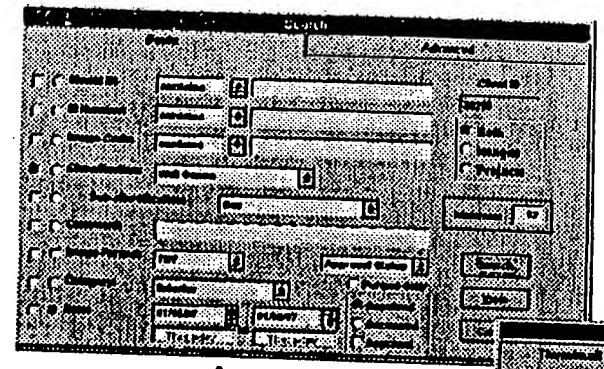
** Current Period Storage Summary

| | | |
|---|---|---|
| 9 | Active: | 13,857,357 bytes |
| | Purged: | bytes |
| 9 | Total: | 13,857,357 bytes |

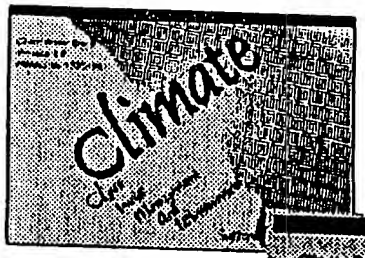
Make all cheques payable to: Monet, Inc.
If you have any questions concerning this invoice, call: John Jebens, 813-870-3300
Note: Monet does not remit or collect sales tax.

THANK YOU FOR YOUR BUSINESS!

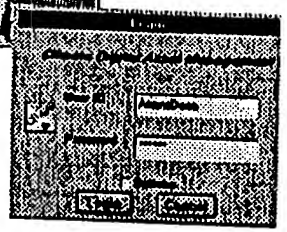
# User Interface Screen Captures

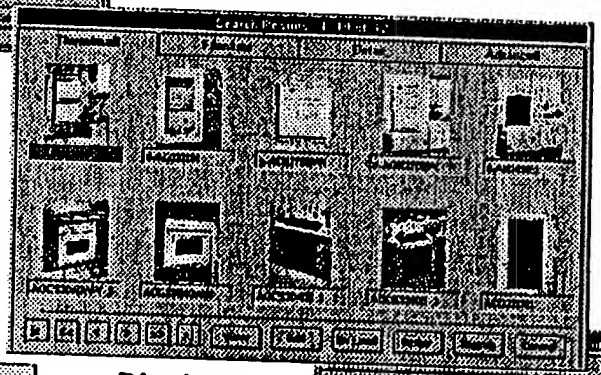


Locate

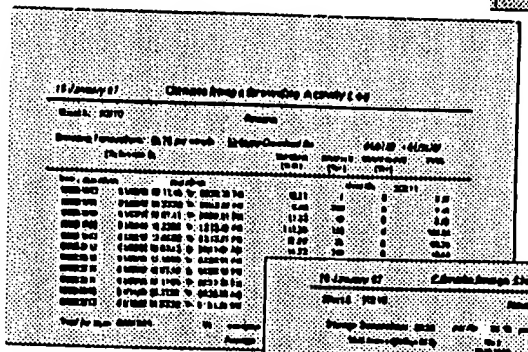



Security

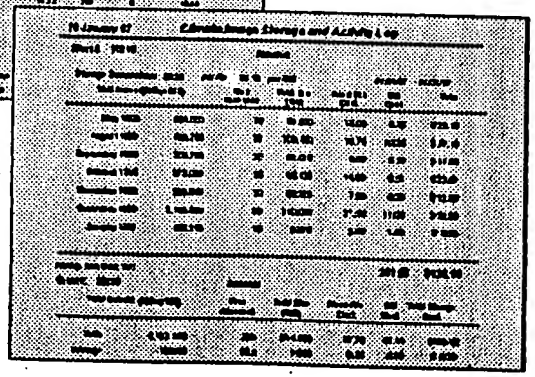


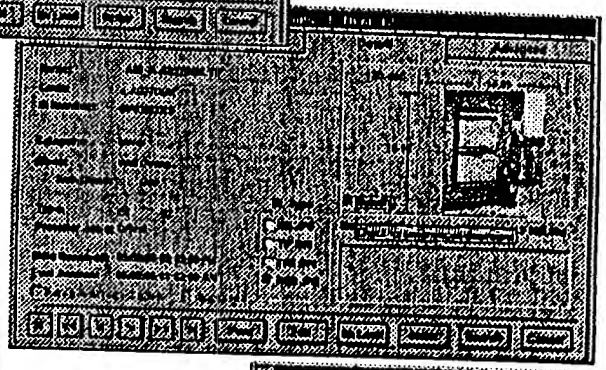


Display

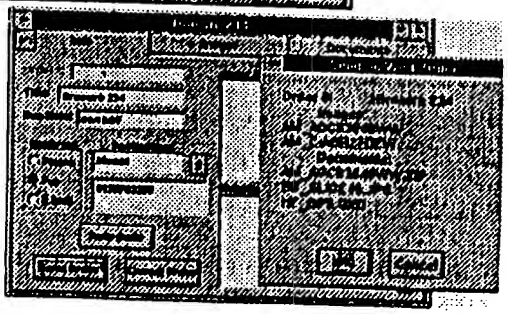


Reports





Send



# Monet® Detailed Description



**Detailed Description of the Preferred Embodiment**

Referring to FIG. 1 and 5 there is illustrated a computerized digital media asset management system including a unique work order build and automated delivery system according to the present invention. The present invention includes a host system 4 comprised of one or more computers 4200,4400,4700,4600 with video display devices 4100 functioning as task specific servers as required by usage. The computer system(s) at the host location 4 may be an IBM®, IBM® compatible, any Intel based compatible, Digital Equipment® Alpha® based, or Alpha® based compatible computer. Display devices 4100, 4600a for the host computers can be any VGA CRT such as a high resolution video monitor or an LCD (liquid crystal display) panel display device 4100. The computer system(s) 3400 at image provider server (hereinafter referred to as "suppliers") locations 3 may be IBM®, IBM® compatible, any Intel based compatible, Digital Equipment® Alpha® based, or Alpha® based compatible computer. The computer(s) 2100 at the browser and client order locations (hereinafter referrd to as "client") 2 may be IBM®, IBM® compatible, any Intel based compatible, Digital Equipment® Alpha® based, Alpha® based compatible, Apple Macintosh, Sun SPARC® or Sun compatible, or Internet appliance computer system. The present invention is developed to run on the Microsoft Windows NT® Server operating system at the host 4 and supplier sites 3 but can be ported to the UNIX operating system as needed. The client sites 2 can run the client software on Microsoft Windows 95®, Windows NT®, Windows NT® Workstation, and MAC OS 7.X future enhancements to support Sun Solaris®, MAC NEXT, OS/2 or any other operating system capable of running Microsoft Internet Explorer® or Netscape Navigator® will be completed in the near future. The next version of the client and browser application will be a WEB browser based application developed with Microsoft Active X® and JAVA compatible components. Compatibility with future operating systems is also contemplated

Typical video display 4100,2200,3100 and computer manufacturers 2100,4200,4400,4700,4600,3400 are Hewlett Packard®, IBM®, or Compaq® computer. The computer systems all include a hard disk drive of varying sizes depending on the local usage and load and CD-ROM drives A floppy disk drive is also included. The hard disk drive and CD_ROM drive are preferably integral with and contained inside the respective computer systems. However, any suitable configuration of hard disk drives, CD_ROM drives, or any other mass storage device or sub-system(s) may be used 4410,4420. The CD_ROM drive may be a Sony model CDR-H93RSA and the hard disk may be any SCSI or EIDE type

manufactured by Seagate, Model Barracuda. Additional storage devices will be required at the host location for mass storage of user data and media files. A typical configuration would be a server or several servers with internal hard disks, an external RAID sub-system 4320 for buffering client data, an optical Jukebox 4420 or tape robot 4410 to store near-line media files, and a tape or optical device to serve as an immediate back-up device 4310 for operating system and transactional software. Typical examples of devices would be: a Quantum DLT 2000 digital linear tape drive for tape backup, a DISC (Document Imaging Systems Corp) D-255U Optical tape robot sub-system for client media file storage, and an *n*STOR model CR8e-390T 27 gigabyte tower RAID subsystem.

To permit the data and media files to be input and moved to varying storage devices in the system, all of the server(s) at the host site 4 are networked together using any industry standard interface for local area networks (LAN). Typical examples would be connection to each server or associated workstation by a 10Base-T twisted category 5 twisted pair cable (10 megabit/sec - Ethernet 802.3 protocol). Higher bandwidth requirements can use 100Base-T (100 megabit/sec) connections or ATM (asynchronous transfer mode) at 155 megabits/sec connected with category 5 twisted pair or fiber optic connections.

To permit the supplier servers 3 to communicate with each other and the host site 4, a means of connectivity is established via wide area network connections either through dial-up 4800 or dedicated communication servers 4800 or 11,14 telecommunications lines of varying bandwidth. Examples of dial-up connections would be utilizing a phone line (POTS) with an asynchronous modem rated at 28.8 Kbps, ISDN dial-up BRI (Basic rate interface) rated at 112 Kbps or 128 Kbps, or ISDN dial-up PRI (Primary rate interface) rated at 64Kbps up to 1.536Mbps (or1.920Mbps in Europe). Examples of dedicated connections would be a TI link between two locations (1.5 Mpbs) or fractionalized T1, Frame Relay (56Kbps to 1.5Mpbs), SMDS (Switched multi-megabit data service), SONET (Synchronous optical network), point to point directional microwave, or VSAT (very small aperture satellite) linkages for direct access to interconnect facilities.

To permit the client users 2 to communicate with the host site 4 a means of connectivity is established via wide area network connections through dial-up 14 telephone communication utilizing an asynchronous modem rated at 28.8 Kbps. Connections are established either directly to the host site or through the Internet. Electronic communication occurs after the connection between the client and host have been established.

Optional hard-copy output devices may be provided at all computer locations throughout the system for the purpose of printing out local reports, work orders and administrative reports. Any supported printing device with a minimum paper handling size of 8-1/2 x 11 inches will work properly.

In the illustrated embodiment of the system 1, the user may communicate to the computer system (in 2,3,4) through data entry devices such as a standard keyboard and a pointing device such as a mouse. However, other data entry devices may be used such as speech recognition devices, and digital scanners. The term "click-on" or "clicking", as will be used hereinafter, is well known to computer users familiar with mouse devices. These terms mean particular action is taken by the computer system when the user depresses a button on the mouse while a

symbol corresponding to the position of the mouse relative to a graphical image on the video display device is shown.

The software 20,30,40 of the present invention is executed by the respective computer(s) 2,3,4 and includes a user interface 256 (client),356 (supplier),900 (host) for interacting with each respective user through the keyboard or the mouse. Included in the host software are 4 main databases: an image database 560, an activity database 640, a configuration database 620 and a mail database 920. The databases are managed by a database manager program 46 such as Microsoft SQL server, but any suitable SQL based database management program may be used.

Referring now to FIG.1 and 2, there is shown a diagrammatic illustration of a specific embodiment of the overall structure of the software for the entire system 20,30,40. The system process has user interaction from three distinct locations in the overall wide area system 2,3,4. Each of the three operates as a separate function and usually but not always on a separate computer and usually but not always at a separate geographic location that can be anywhere in the world. The overall purpose of the present invention is to provide access to a centralized or centrally controlled and distributed database of client media files and associated data. It further provides a mechanism for authorized clients and service providers to access the central library either locally on a network, through dial-up directly as an intranet, and over the Internet via the World Wide Web. The unique features of the system are the ability for an authorized user to access and browse a client database from anywhere, search and view media files stored, retrieve various types of lower resolution representations of the original larger media files. The user then composes local documents with these lower resolution files and may include other files in the process that exist only on the users computer 2. Once completed, the user then connects back to the host system 4 through one of several means 11,14 and logs on using their account identifier 252,254. Once on the system the user can now create a work order 356 and select the files used from a local list, add files to the order that are only on the users local computer, and then direct the transmission of the entire package to a supplier site from a list of valid subscribed and available suppliers 3. The system will automatically transmit the order and local documents to the host 4. The system will then retrieve the original larger files listed in the order from the media file-system 680. Once the entire job has been gathered it will then automatically establish a connection 11,14 with the specified supplier site 3 and transmit the entire job to that location without any human intervention. All activity of the entire process from original media file entry to a job order is tracked and reported as needed. The next sections will deal with the specifics of each functional part of the system.

Each client subscribed to the system is secured from any other on the system by a unique 5 digit numeric client identification number (in this instance client represents a master corporate user of the system for storage and management of the files described throughout the media asset management process). Each client is also assigned a unique 3 digit prefix that is used to secure all media files and protect against unauthorized access to view those files. For each client of the system additional users are set up in the system administration module 90 and given user names and passwords. Users may be client systems that can browse and order 2 or supplier systems 3 that can browse, order, input and receive orders. The next step

is to determine the fixed field hierarchy in the database for each client. This is essentially the data portion that will be fixed for the purpose of search and retrieval of client media files once they are in the system. The system provides a class field with a sub-class field that is sub-keyed 623, a category key field 623 and up to ten user defined fields if needed 661. These fields will contain specific data defined by the client for the purposes of categorizing the media files that are entered into the system. Each class record can have one or many sub-class records keyed to it. Once the database fields 621,622,623 are configured for a client, the system is ready to accept files.

For clarity in the descriptive process we will use a scenario comprised of one client, two suppliers and two users. The client will be referred to as client 22222. The suppliers will be referred to as supplier "A" and supplier "B" while the users will be referred to as user "A" and user "B". Referring to FIG. 2 and 3a an image provider 30 (supplier A) copies files to folders that are configured on that system for client 22222 as directed by the client. The processing that occurs is referred to on FIG. 4a. The user (supplier A) drops file on the folder of the image provider server by using a mouse to drag and drop the files 301. The hot-folder transport system 302 takes over at this point which constantly monitors all configured folders for incoming files. The configured folders hold settings 310 that tell the system what client destination folder on the host site these new files will be sent to, the location and type of network connection (dial-up or direct) that is to be established, the service profile identifier if it is a dial-up data connection and the proper user identifier and password for access to the remote site for transmitting files. The hot-folder library and associated module are licensed from ION Publishing and integrated in to the Climate system. When files are detected in a client folder the system moves the file to a processing queue 304,306 and then compresses the file as configured. The communication portion of the computer then establishes a connection with the host site by automatically 308 dialing or sending a network request, establishes a valid communication link 11, passes the log-in information and the machine name. Once established the software begins to transmit the file. The file remains stored on the provider 3 system until it is completely transmitted and an acknowledgment is received. After all files are sent the system logs off and stores activity to the local error tracking log file. Activity of the files being transmitted is then recorded 312.

Referring to FIG 4b, the files received from supplier A system 3 are now stored in the client queue 410 and are then decompressed 422 and stored in the client incoming folder 424. The next step is to log the client file into the system and update the database. The transporter 426 moves the client file to the appropriate autologger as directed by the autolog monitor 428 The autolog server software 45 then performs the appropriate generation of low resolution files if applicable in conjunction with the lo-res server 47. Data specific to the configuration 620 of the clients specific autologger 46 performs a sequence of operations. Amonag the functions the autologger will perform is a preset compression value and specific type of compression performed on each valid file that passes through it. For example if TIFF (tag image file format) or CT (Scitex continuous tone files are passed to an autologger and it is preset to perform a 85 value Adobe® JPEG compatible compression, then the library providing the algorithm will be invoked and apply the

compression routine to the file and store it that way in the image file system 680. Other file formats that will allow industry standard compression to be applied are contemplated to be supported in future revisions. The file is checked for a duplicate filename 452 against the database 660 and then modified if one exists 454. The file is then parsed for image information 458 if applicable, and then a thumbnail representation is generated in the form of a JPEG file that is de-resed and scaled to about one square inch in size 462. If the image is a valid type then a lo-res representation is generated 466 and the files are moved 468 to the appropriate storage device and location 680. (Optionally in certain work environments the files may be also move to a separate OPI server 470 that may support output devices in a local workflow environment.) Data extracted and stored from the new file reside in the image database 660 and are organized by client and type of supplemental files created in the main file system 680 and the dates and input activity is stored in the activity database 640. Client 22222 media files are now available for access and data editing by users and providers.

Referring to FIG 4d and 4e user A will log on 252 by supplying a client number (22222), a user id and password 254 to begin a browsing session. Usually the users computer 2 will establish a dial-up connection with a modem 14 to the host 4 and the session can begin. User A will select an operation from the graphic interface of the Climate client software 256 and then select a search operation 260 which will invoke the search screen 270. The criteria is passed back to the host 4 and processed 510 for the matching results. Search results are composed 520 and returned to user A 270 where they can be viewed as thumbnails by clicking on the tab 262 and viewing screen 272 or textual information by clicking on the tab 264 and viewing screen 274 or expanded information by further clicking 268 and screen 276 will display. User A may now select a file to retrieve the low resolution representation by clicking on the thumbnail in screen 272 and clicking the download option 268. The file will be transmitted from the host 4 image database 660 by the host server 530,540 and then log an activity event 550 stored in the activity database 640 charged to client 22222 and user A for the amounts stored in the configuration database 620. User A now logs off the system and closing connect time is diplayed on user A's system 2.

User A will now create a local document using, for example, Quark® Express page makeup software. Client 22222 has requested a one page brochure for this example. User A launches Quark and proceeds to make a document as directed. User A inserts the low resolution copy of the file downloaded previously from the Climate system 1. Upon completion of the document user A saves the file locally on his/her machine 2. The client 22222 has directed user A to send the completed document including the original high resolution files stored on the host site 4 to supplier B for disposition.

Referring to FIG 4g and 4h user A again logs on 352 by supplying a client number (22222), a user id and password 254 to begin a session 356. This time user A will select the New order 360 operation by clicking on the tab and the screen 370 will be displayed. User A fills out the appropriate information description and instructions for supplier B to view on receipt. Next, user A will add images 362 by selecting the file that was used in the document and is now on user A's system by clicking on the filename. User A will click on attachments 364 to add the local

document to be sent with the order. In this case it is the Quark page previously described. After the order is complete and accurate user A will click on send order 366 and select the designated supplier B from the supplier list 376. User A will also choose the method to notify supplier B that a job has been sent and will be delivered to supplier B's computer 3. The choices are Fax or E-mail and if the certified 376 option is checked an automatic acknowledgment will be returned that the notification was successfully transmitted. After verification user A will click on send 376. The order is prepared by the software on user A's computer 20 and is sent to the host 4 Internet server 750 for processing.. The order and local file is transmitted 14 to the Internet server 750 where it is processed 760, 770 the order is parsed by the mail server 920 and is then parsed for images and directed to the destination 780. The file requested from the host file system 680 is retrieved and together with the order form and attached documents is passed to the hot folder system 786 for delivery. The hot folder server 790 then prepares the files to be transmitted with the same processing algorithm as depicted in Fig 4a 304, 306 and then chooses supplier B configuration from the configuration database 620 files are detected in a client folder. The system moves the file to a processing queue on 790 (same process as 304,306) and then compresses the file as configured. The communication portion of the computer then establishes a connection with the supplier B site 3 by automatically dialing or sending a network request, establishes a valid communication link 11, passes the log-in information and the machine name. Once established the software begins to transmit the file. The file remains stored on the host 4 system until it is completely transmitted and an acknowledgment is received. After all files are sent the system log off and store activity to the local error tracking log file. Activity of the files being transmitted is then recorded 312.

Referring to FIG 4j files arrive 80 from the host 4 on to supplier A system 3 in receive file queue 820. Files are decompressed by the hot-folder system 625 and stored to an incoming folder 830, concurrently the order form is passed to the supplier B mail account by the host mail server 75. The order form 810 can be viewed with all of the instructions as initiated by user A and printed or saved for later reference on supplier B computer 3.

Referring to FIG 4k while a client system 2 is connected to the host server 4 the user A is able to obtain specific reports on various functions of the system and then print them to a local printer 4500 if so equipped. Among the administrative functions performed at a client site are client A database maintenance 860 which allows the authorized (and edit permissioned) user A to edit various data fields for any record in the client A database and update the image database 660 at the host site 4. Security permissions of users are read only, which means they can only access data but not change it, and administrative, which means they can edit client records and change the stored date at the host site 4. If authorized, a user can perform client file maintenance 870 inclusive of marking record for removal (purge) and purging actual data and media files in the host system 4. The reports that can be generated to the video display 2200 or to an optional hard copy device 4500 are activity reporting which includes on-line browsing time 882, FIG 6 per user and client, stored file summaries 882, FIG 7 per client, new image input current period summaries 882, FIG 9, orders pending and processed 882, FIG 10, file purge reports 882, FIG 11, and invoicing for the client 884, FIG 12. Future additions of

performance, troubleshooting, and messaging 886 are contemplated. Administrative security level users can perform client administration 890 which includes creating new users or suppliers on behalf of a client 892, data structure creation and modification 892, 621,622,623, and autologger configuration 45.

Referring to FIG 4i an administrative user at the host server 4 is able to obtain specific reports on various functions of the system and then print them to a local printer 4500 if so equipped. Among the administrative functions performed at a host site 4 are client A database maintenance 930 which allows the to edit various data fields for any record in the client A database and update the image database 936. New clients can be created 976 and all file maintenance to create the data structure and related user and suppliers as well as the autologging configuration. Security permissions of users can be modified 970 to administrative, which means they can edit client records and change the stored date or read only, which means data can only be viewed. The reports that can be generated to the video display 2200 or to an optional hard copy device 4500 are activity reporting which includes on-line browsing time 950, FIG 6 per user and client, stored file summaries 950, FIG 7 per client, new image input current period summaries 950, FIG 9, orders pending and processed 950, FIG 10, file purge reports 882, FIG 11, and invoicing for the client 958, FIG 12. Future additions of performance, troubleshooting, and messaging administration 886 are contemplated.

The recipient databases configuration 620, activity 640, and image 660 as well as the file system repository 680 all are stored in the illustrated embodiment on the hard disk 4320 or supplemental storage sub-systems 4420, 4410 (FIG 5).

In an alternate embodiment the client database can be distributed across multiple servers located in separate geographical areas across the country (or world). The purpose of which is to provide frequently used files and all client data at a local site for quicker access and reduce telecommunication cost. The host site 4 will maintain the entire database while only replicating 444, 314 the specific client data as configured by the administration module 90.

In an alternate embodiment the host site 4 can elect to provide a mirroring system for the file system 680 and the image database 640 to a remotely located facility in a separate geographic location for security purposes and disaster recovery 932, 934.

Specific embodiments of the method and apparatus for digital media asset management and distribution according to the invention have been described for the purpose of illustrating the manner in which the invention may be made and used. It should be understood that implementation of other variations and modifications of the invention and its various aspects will be apparent to those skilled in the art, and that the invention is not limited by these specific embodiments described. It is therefore contemplated to cover by the present invention any and all modifications, variations, or equivalents that fall within the true spirit and scope of the basic underlying principles disclosed and claimed herein.

# Monet®
# Claims



**What is claimed is:**

1. An integrated digital electronic network system for unified image and document file storage, management, selection, work order composition and distribution of stored files as well as locally attached files to remote servers subscribed to the network either locally or through wide area telecommunications; wherein each customer communicates from a remote site to a storage and distribution center, the system comprising:
    a) a central host server having
        1) an input device for building the customer data structure and entering access codes, account numbers and assigning security access
        2) display means for displaying textual and graphic information representing the customer account data, the actual files that reside in the system, activity reporting and storage data.
        3) memory device for storage of data in the form of records, including customer account data, unique search structure, client account identifier, client unique file prefix, customer stored file location, and customer or customers service providers activity on the customers data.
        4) communication card(s) to connect various customer or customers service providers remote computers or servers to the host storage and distribution center to permit communicating data, viewing the customer file representations, retrieving versions of the customers files, viewing usage reports, entering work orders, attaching local files to be included with the work order, and forwarding the work order and files to the distribution center host for processing and disposition.
        5) a processor or several processors coupled to the display means, memory device(s), and input device(s) for processing and control of the customer data and database of files input by the remote computers (networked or connected through various telecommunication links), updating the customer database, processing the image data forms and file bundles from remote servers,processing image order forms, storing in memory the file data, location, historical use and access information of the customer files, processing customer orders of files to be sent to another remote computer subscribed to the network, forwarding of files that are attached to work orders to remote computers subscribed to the

network, generate monthly or on-the-fly reports of customer activity and storage, generated monthly invoices of previous reports, generated special reports for maintenance of customer data and files, process changes of customer data and removal of customer data and files no longer needed, provide secured

6) login processing of valid customers and remote computers sending data and files, process synchronization of secondary customer data located on other computers either locally or connected through telecommunications links, process moving associated files inbound from other local or remote networked computers to attached memory storage devices, process comparisons of duplicate data and file entry and append identifier automatically to designate sequential duplicates of entered data and files, process administration of customer hot-folders entered on the system, process automatic connection and transmission of files for all customer hot-folders, run the hot-folder background processes, connect the security key for the software to the host processor.

7) an hard copy device to print activity reports or screen data of customer information, invoices, administration reports, purge logs, customer data records, customer new image records, work order data forms, system diagnostics, and

b) a remote or locally networked (browsing) computer having

1) an input device for entry of login data to customers database or customers service provider including entry of data and input of search criteria for customers related file(s), data administration (if so permissioned), entering report generation criteria, entering new data forms, and entering work order forms.

2) display means for displaying textual and graphic information representing the customer account data and the actual information on files that reside in the system, view enhanced views of representations of the customer files, and view activity reporting.

3) memory device for storage of temporary data in the form of records, including customer account data, unique search structure, client account identifier, client unique file prefix filtering routine, temporary search criteria data files, search results data files, thumbnail view files of search results, time on system, temporary update data records (if permissioned), intermediate resolution files retrieved, and telecommunication (or local network) connection data.

4) communication card or modem to connect remote computer to the host storage and distribution center to permit communicating data, viewing the customer file representations, retrieving versions of the customers files, viewing usage reports, entering work orders, attaching local files to be included with the work order, and forwarding the work order and files to the distribution center host for processing and disposition.

5) a processor coupled to the display means, memory device(s), and input device for processing and control of the customer login data

and access to the database of files, process the search requests, process the updating of the customer database records, build and process the image data forms and image order forms, and process the forwarding of files that are attached to work orders to the host system.

6) an optional hard copy device to print activity reports or screen data of customer information, work orders, and new image data forms, and

c) a remote or locally networked (supplier input server) computer having

1) an input device for entry of login data to customers database or customers service provider including entry of data and input of search criteria for customers related file(s), data administration (if so permissioned), entering report generation criteria, entering and retrieving new data forms, retrieving work order forms, linking dataforms to files being sent to the host, to copy files to various hot-folders, and correcting customer data forms retrieved from the host.

2) display means for displaying textual and graphic information representing the customer account data and the actual information on files that reside in the system, view retrieved data and image order forms, view previews of the files to be input, view documents passed to this system by the host, view complete documents and images retrieved from the host and view activity reporting.

3) memory device for storage of temporary data in the form of records, including customer account data, unique search structure, client account identifier, client unique file prefix filtering routine, temporary search criteria data files, search results data files, thumbnail view files of search results, time on system, temporary update data records (if permissioned), temporary data form sets received from host, intermediate resolution files retrieved, high resolution files to be input, temporary post processed bundle files to be transmitted to the host, compressed intermediate files to be sent to host for input or transfer to hot-folder processing, and telecommunication (or local network) connection data.

4) communication card or modem to connect remote computer to the host storage and distribution center to permit communicating data, viewing the customer file representations, retrieving versions of the customers files, viewing usage reports, entering work orders, attaching local files to be included with the work order, forwarding work orders and files to the host for distribution, forwarding processed file bundles to the host for processing and disposition, forwarding hot-folder file transfers, and receiving hot-folder file transfers.

5) a processor coupled to the display means, memory device(s), and input device for processing and control of the customer login data and access to the database of files, process the search requests, process the updating of the customer database records, build and

process the image data forms and image order forms, process the forwarding of files that are attached to work orders to the host system, process image record linkages, process compression requests, process lo-res file requests, extract data from processed files, run lossless compression on document files, process both immediate and timed delay transfer requests to host.

6) an optional hard copy device to print activity reports or screen data of customer information, work orders, new image data forms, and processed data logs, and

d) one or many communication links coupling the customer and service provider access computer(s) to the host storage and distribution center to permit communication of the customer search and order software, to permit routing of files to and from hot-folder computers, and to provide communication of the service provider servers inputting files in to the host system on the customers behalf.

**Claims Summary:**

1) An integrated customizable network system for image storage, management, and distribution.
2) Client specific (protected) access (login) on a network
3) Comprehensive file management information system
4) Fully automated computer order and document passing mechanism
5) Automated workflow utilizing application specific servers
6) Integrated image file compression and storage processor
7) Customizable independent and scaleable information workflow
8) Un-restricted hot-folder and data transfer bandwidth, and communication connectivity in conjunction with everything else

# Monet®
# Applicability
# Monet White Paper



Applicability of the Invention

RE: CLIMATE VERSION 2.5 WHITE PAPER
Date: March 6, 1997
Contact: John H. Jebens

## Climate Version 2.5
## Image Management and Distribution Software

Monet is announcing the next major release of its client image management and distribution software solution for image-intensive businesses, as well as print industry service providers. Monet provides the software under the CLIMATE (Client Image MAnagement and TElecommunications) trade name. Integration and consulting services are provided by Monet for turnkey installations. CLIMATE is also offered as a service through Monet's facilities in Tampa, reducing the investment of costly in-house computer systems, disk storage, archiving, and telecommunications hardware. Additionally, staffing needs for system and telecommunications specialists are reduced significantly or eliminated. The CLIMATE solution is targeted toward businesses who need to control and distribute their digital assets or wish to provide these services to their clients. A key feature of the CLIMATE software is its open, wide area connectivity, enabling clients from around the world to communicate, manage, and deliver digital assets. Although primarily an Intranet, version 2.5 will enable Internet access as an option.

The "Alliance Partner" network of CLIMATE providers has created a unique pool of other resources (such as Indigo or large format output, specialized or emergency pre-press services, etc.) located in strategic geographic cities around the US and Canada. By becoming an "Alliance Partner", a client or service provider has the option of starting with CLIMATE as a

service and up-grading to a host site at a later time. All digital files and data are seamlessly migrated by Monet at the time an upgrade occurs. A list of new features in version 2.5 is listed on the following page.

## CLIMATE VERSION 2.5 NEW FEATURES

- Completely new optimized browser including librarian-determined remote data editing
- Improved work order builder drag and drop interface with system validation
- Enhanced and more scaleable communications gateway providing network response and view over conventional modem connections
- PC, MAC, Internet access capability via WEB based client
- Work-In-Process (WIP) identification on all browser and download activities allowing reports generated to identify not only the client who accessed the system, but what job to charge against
- Wide area Auto-logging for mass input and data correction at a later time
- Project Builder for parent-child file relationship
- Selectable decompression or retain compression upon hi--res delivery
- JPEG RGB lo-res generation choice for multimedia Internet applications
- Independent OPI server choice at host site installations allowing complete compatibility and adaptability to existing workflows
- New host site administrative functions including media-type designation or physical media copy for distribution

## CLIMATE VERSION 2.5 WORKFLOW

Monet CLIMATE system activity is totally controlled by the Monet customer. Generally a client or representing agency initiates all new orders for image input, whether it is scanned or existing digital, and fills out electronic data forms which are then processed by CLIMATE. In version 2.5 this function now resides at the supplier sites as well, for those service providers offering data management services. Images or documents are linked to these data forms, placed in service provider queues, and automatically routed to the service provider, remote or local. The connections can be dial-up or fixed, Basic ISDN, PRI-ISDN, SMDS, Frame Relay,

T1 or ATM/OC-3 if supported. CLIMATE processes and stores the images/documents and makes the data available for browsing and multi-type lo-res retrieval as determined by the librarian. All documents and images may be retrieved to the desktop. Hi-res files can now be permissioned for desktop retrieval over modem lines where hi-speed data connections are unavailable.

Work orders for processing occur in the same manner (images or documents already on the system). A client builds the work order after browsing or downloading OPI images for placement in a document. Additionally, the page makeup or other document(s) can be transmitted to the particular service provider (or an NT remote server designated only for hot-foldering). Once images and any associated documents are selected, the job is sent to CLIMATE for distribution. The order is then routed for retrieval by the appropriate service provider. CLIMATE provides monthly reporting of activity and billing for clients. The reports include details of file storage usage and any of their subscribed users' and service providers' activity. Version 2.5 adds the work-in-process feature. Reports can be customized beyond the standard formats.

## SYSTEM DESCRIPTION

The CLIMATE system is based upon an integrated distributed client/server web with wide area interconnection at two levels; image browsing and file transportation. Monet's CLIMATE system now features an enhanced communication gateway front end as well as the server-based file delivery processing for the print industry. Flexible telecommunications and network connectivity make CLIMATE adaptable to any demand requirements by its users.

The total system solution is comprised of a data repository for digital assets, variable bandwidth telecommunications, 3 tiered image resolution, firewall security, complete image management and control, comprehensive activity reports at client site, and graphic arts knowledgeable support. Image browsing is handled over conventional dial-up telephone or ISDN lines with standard computer hardware, currently Macintosh and now in version 2.5 Windows 95 or NT on the PC. Monet software additions optimizes communication speed for file downloads and thumbnail image searching.

File transportation is handled by a communications server that is located at either a customer site and/or service provider sites and allows distributed file processing, retrieval, and communications handling. Functionality of the communications server is tailored to the Graphic Arts clients' needs and/or to their customers or suppliers, i.e. specific file format translations and communications connections. The ability to convert various file formats allows efficient re-purposing of image data for intermedia applications, including de-centralized on-demand printing. The growth of the "Alliance Partner Network" now provides additional sources for on-demand output of various flavors.

Monet incorporates the Windows NT server operating system. Process functions that handle communications, image processing, variable compression, file translation, file transmission, and reporting are divided up among three core servers that are task-specific. File translation and order processing are distributed over the wide area as a function of the number of active communication servers that are subscribed to the system. The distribution stabilizes average throughput of the system and virtually eliminates I/O overload. Monet keeps track of the data through an SQL driven database that provides links to the image library. This method enables the system to maintain an independent file structure for all image files and track variable compression ratios that are client-defined for those files it applies to, independent of the overall system. All non-image files are compressed losslessly.

Monet utilizes a licensed software engine as the core low resolution file generator. As new file formats are supported they will automatically be supported within Climate. In version 2.5 a host installation can elect to use whatever OPI server they desire. We understand that everyone has a preference when it comes to OPI servers and in many cases it is an operating system issue. The system maintains a tiered file system for browsing, TIFF , RGB JPEG and standard hi-res read only image. All files archived to the system are never modified, thus insuring integrity of the compressed file structure at any ratio. However, configuration changes can be made to allow updating as opposed to new file entry. Any duplicate files accidentally entered into the system are automatically appended with a filename suffix to denote such errors, thus eliminating possible overwrites. Files that would need revision are saved as a new file, and the client librarian would determine the need to purge any older versions. Another feature of the storage system is the thumbnail and low-res generation.

Occasionally a file may be corrupted in the generation process, therefore CLIMATE provides a preview capability as the images are processed to check against file degradation. These files are what the user sees upon browsing or low-res download. If a file was corrupted, the low-res files will show the fault, thus, the view files are a verification of the image library integrity. This feature is configurable and thus if speed is an issue it can be disabled. The Monet processor module performs all of these tasks in the communication server prior to passing files and data to the main server for input into the library.

Image File formats currently supported for variable JPEG compression are TIFF, and Scitex CT. All image formats are supported for lossless compression within the system as well as any other type of document file. The CLIMATE system also allows a user to group elements into a job for storage on the system or build projects that create links between records. Monet is looking toward TIFF/IT and PDF and (single part JPEG/DCS for print) as the long range standards. The phase III (version 3) implementation of CLIMATE will support distributed database communication, site mirroring, remote and partial synchronization, remote archiving and integrated communication with other installed databases.

Communication services are being offered initially over Basic Rate ISDN with other bandwidths and media types as they become regionally available. Because Climate does not rely on any one medium it is totally scaleable as demands increase. Monet has improved its communication handler for passage of secured data between subscriber points. This "bundler" handles all of the pre- packaging by losslessly compressing the files and then automatically transmitting them to the server. If a connection fails the files are preserved at the initiating end and will be re-sent once the connection is back. Acknowledgment from the host server tells the remote end the files were received successfully. Supplier communication servers initiate all inbound and outbound data traffic. CLIMATE handles only requests and processes data with its intelligent processing server as the system entry point. This approach allows the subscriber to take advantage of communications economies and provides for secure connections. Server hot-foldering can be configured to any server on the Climate Intranet, independent of the host site.

## CONCLUSION

This entire process is easily viewed and managed from the desktop, providing seamless, cost effective, instant digital delivery of corporate-wide communications at significant savings over courier-based operations. Monet offers CLIMATE services to the Graphic Arts trade on a Host OEM basis for those who would prefer to maintain control of their existing accounts' Digital Assets. Monet's beta systems are currently operational at its Tampa facility, Midland MI, Milan IL, and Boston MA. True open architecture, scalability, automated order processing, and extensive customizable reporting make CLIMATE the best media asset environment available whether the need is in-house or as a third party out-source. Pricing for the software and service is based on system size and anticipated subscriber requirements. Pricing and sample configurations are available upon request under non-disclosure.

# Monet®
# Applicability
# Monet Uniqueness



## Applicability of the Invention - Market Differences From Prior Art

RE: **The Monet Market Concept**
Date: December 6, 1996
Contact: John H. Jebens

### The Monet Concept of Digital Media Asset Management
### Q&A on issues regarding client needs

As with any new product and service offering there is always going to be a flood of related "competitive products". The problem becomes, "Why should I choose one product or service over another?". Usually this is relatively easily resolved by running benchmarks or performing a feature analysis to reduce the list of likely choices. Although this works well when one is analyzing off-the-shelf products and services, it fails miserably when one is analyzing an entire new technology and work flow. You may ask how this can be considered a new technology? Digital files and electronic publishing have been around now for a decade. Digital telecommunications has been in use far longer. Compuserve pioneered the concept of wide area access and centralized storage (at least in appearance). So what is different here when we have a company offering software that provides a complete solution to centralized storage and wide area access via digital telecommunication?

The difference is that **"this is not about technology!" It is about a completely new way of doing business.** Monet and the Climate system represent the last frontier facing <u>any</u> large corporate client, printer, pre-press, new media, Internet content provider, CD publishing house, or digital motion picture distributor. The entire way the future of print and electronic publishing is moving is analogous to the growth of the Internet. That direction is completely electronic encompassing communication, storage, and automated distribution. Therefore, the

problem to solve here is not only one of technology, although technology is at the core of the eventual solution. Given the above general statements, let's explore some questions asked by current and prospective clients.

*What is the most crucial aspect of building a centralized library?*

Obviously there are many, but the single most important element that makes a library usable is how well planned the data structure surrounding it's objects are. This is not just a database. The database is the mechanism that links to the image files, documents or any other piece of data to be catalogued. Monet and it's alliance partners spend a tremendous amount of time helping determine the optimal method and hierarchy of the data set before anything is ever entered in the system. In a sense you are designing a card catalog system for the objects to be stored. Don't get caught up in exotic search capabilities which are emphasized as the strength of some products. Simplified elemental searches are the ones that are used in 95% of queries by most users. Remember that the initial purpose here is to get a job built, not to do research.

*Why is Monet different than other database products?*

Monet treats the database as the core piece of input and output operations. It is only a piece of the entire system. By keeping an open, scaleable methodology, the system can be enhanced without the risk of re-building an entire library. The Monet database is SQL driven (SQL - Structured Query Language is the largest standard for complex database design, ie Oracle, Sybase, Microsoft are SQL engines). The jury is out on whether embedded object or pointer (like SQL) technology is best. We feel that the database is the heart of the entire system. A 2 terabyte archive in an embedded environment is 2 terabytes. In a SQL pointer world the database may only be a few hundred megabytes and the rest are the object files. From a recovery standpoint in the event of a disaster, the latter can be restored more quickly.

*What makes Monet different than other SQL based products?*

Reporting and tracking. Our focus is on working with the people who really are in charge of producing the output. A big oversight on the part of many shrink-wrap products is that they put too much emphasis on the search interface. Monet tracks activity much like a legal time and billing system. Any advertising agency, designer, or in-house corporate artist is always working on a job or specific budget item. We allow any event to be tracked to that level whether it is browsing or input/output activity. The system needs to be "workflow friendly".

*Why did Monet not initially come out with Internet availability?*

Our position on the Internet parallels much of what Bob Metcalfe (the inventor of Ethernet and network pioneer) has been saying for the last year or so. The Internet is a wonderful research tool but it is not well suited for distribution of large mission critical files. Remember that in an Intranet (like we prefer) environment you control the destiny and bandwidth of how your files move. In the Internet you have no control whatsoever. If a 40 megabyte file goes out on a 1.5

megabit pipe, but hits a bottleneck that reduces it to say, 128 kilobits, the time to transmit will increase ten-fold. Another paramount issue is the new pricing that is inevitable. The life span for unlimited dial-up access for $19.95 monthly is questionable. Keep in mind that somewhere in the back end there has to be the capacity to keep all this data moving as users crowd the Internet. Somebody will pay for it. Guess who? Monet is adding Internet access to the next release. The users can have a choice. Large file solutions can't ever totally rely on the Internet as the only access point to our system.

*What is Monet's hot-foldering approach?*

Hot-folder transferring is a great concept. Essentially, Hot-foldering is a method of having directories or folders on a server that automatically route files to some defined destination when a person copies or moves a file into that folder. The destination may be in another state or country. The telecommunication is handled by the software. Monet's application for this is much longer term than other products in the sense that it is not tied to any one communication technology. Although we primarily install Basic Rate ISDN, our system can scale up to bandwidths of ATM levels if needed. We support both dial-up and network connections. Other products are either tied to a board (like 4-Sight) which limits bandwidth or are proprietary (like WAMNET) which limits your control and cost structure. Monet offers it's hot-folder technology as a stand alone option as well.

*What about other bulletin board systems like Adobe Virtual network or CE Quickmail, don't they provide similar functionality?*

Not at all. First, we are not a bulletin board or an e-mail system. We choose to use industry standard products for that. Although we have messaging built within, we would always recommend that a company maintain whatever form of e-mail they have adopted. We can interface as needed to other e-mail systems. As for bulletin boards, that is a completely separate application which is quickly being supplanted by the Internet and company home-pages or FTP sites. Again a bridge can be built as necessary.

*Is there a limitation to the type of files your system can handle?*

No. The system currently supports anything you want to put into it. We only generate previews for certain file types but that is a modular piece of the engine. If you really want a preview of a certain file type it can be added. If the system doesn't recognize it, then it simply displays an icon that says "no preview available". Ultimately this can include sound bites and motion files. Monet does not put an emphasis on this in the beginning because it is very bleeding edge and the market is in early stages of development. Formats are still an issue and most of our focus is toward the digital printed world. This aspect will evolve as the standards are set.

*How does the Monet system handle compression?*

Compression is up to the client librarian. Monet offers a built-in Adobe Photoshop compatible

JPEG for certain file types. The user can pre-compress a file any way they desire. It is simply a matter of if the program can generate a preview on input or not. Any documents or other file types can compress losslessly with LZW for space conservation. Monet is partnering with several companies that specialize in sophisticated compression technology for future enhancements.

*What about re-purposing of data objects within Monet?*

Re-purposing is one of the paradigm shift terms that is overused and largely misunderstood. First, Monet offers several fixed low-res formats. Our next release will expand that offering to generate some on the fly options or variations of the original file. In an ideal world one would want a 1:0.75 aspect RGB from a 5X7 JPEG hi-res file stored in the system. The problem is that the aspect of the 5X7 is 0.71:1. It is doubtful any artist will trust a translation engine to decide what data to crop off. The other issues are color shift, bit loss, etc. Monet's position is to let the creative people who build these files also control them. We are a long ways from intelligent translation engines that indeed "re-purpose". They don't exist today largely because the reality is that certain files created for print do not as an example, re-purpose to full motion video. However, Monet's modular approach will allow us to interface or plug-in the technology when it becomes reality.

*Can Monet interface with other databases?*

Absolutely. Today we have to write a custom interface, however, because of our ODBC compliance others can extract data if permissioned (ODBC is an industry standard for communicating with different types of databases). In the future we intend to offer bridging modules to connect to other popular image databases that survive the next phase of graphic arts shrink-wrap wars.

*What is the Monet Alliance Partner Program?*

The "Alliance Partner Concept" network of CLIMATE provides the resources to evaluate and implement our solution. It is typically a unique pool of other resources as well (such as Indigo, or large format output, specialized, or application specific pre-publishing services, etc.) located in strategic geographic cities around the US and Canada. By becoming an "Alliance Partner", a client or service provider has the option of starting with CLIMATE as a service and up-grading to a host site as driven by demand and size.

# Monet®
# Prior Art



**Prior Art Companies and Short Descriptions of Products**

**Archetype Inc. - MediaBank** is an image database built around DBF standards. It can be connected on a wide area basis but is primarily sold as a shrink wrap database. Archetype offers OPI server and output management software as well.

**Luminous Media Manager** is the database offering. an Adobe company offering a variety of individual pre-press workflow products. Adobe Virtual Network, Trapwise , Presswise, Color Central OPI.

**Bulldog Group** offers an object oriented image database

**Cascade MediaSphere** is a UNIX based database and OPI server

**Dalim** - primarily workflow tools but has an image database that integrates with their OPI server and workflow manager. Targeted at printers primarily

**EDS - MediaVault** primarily an object image database. Provides low res proxies but not much for workflow.

**MediaWay** is an object database

**Schawk - Click** primarily a routing and bulletin board like system, not a database.

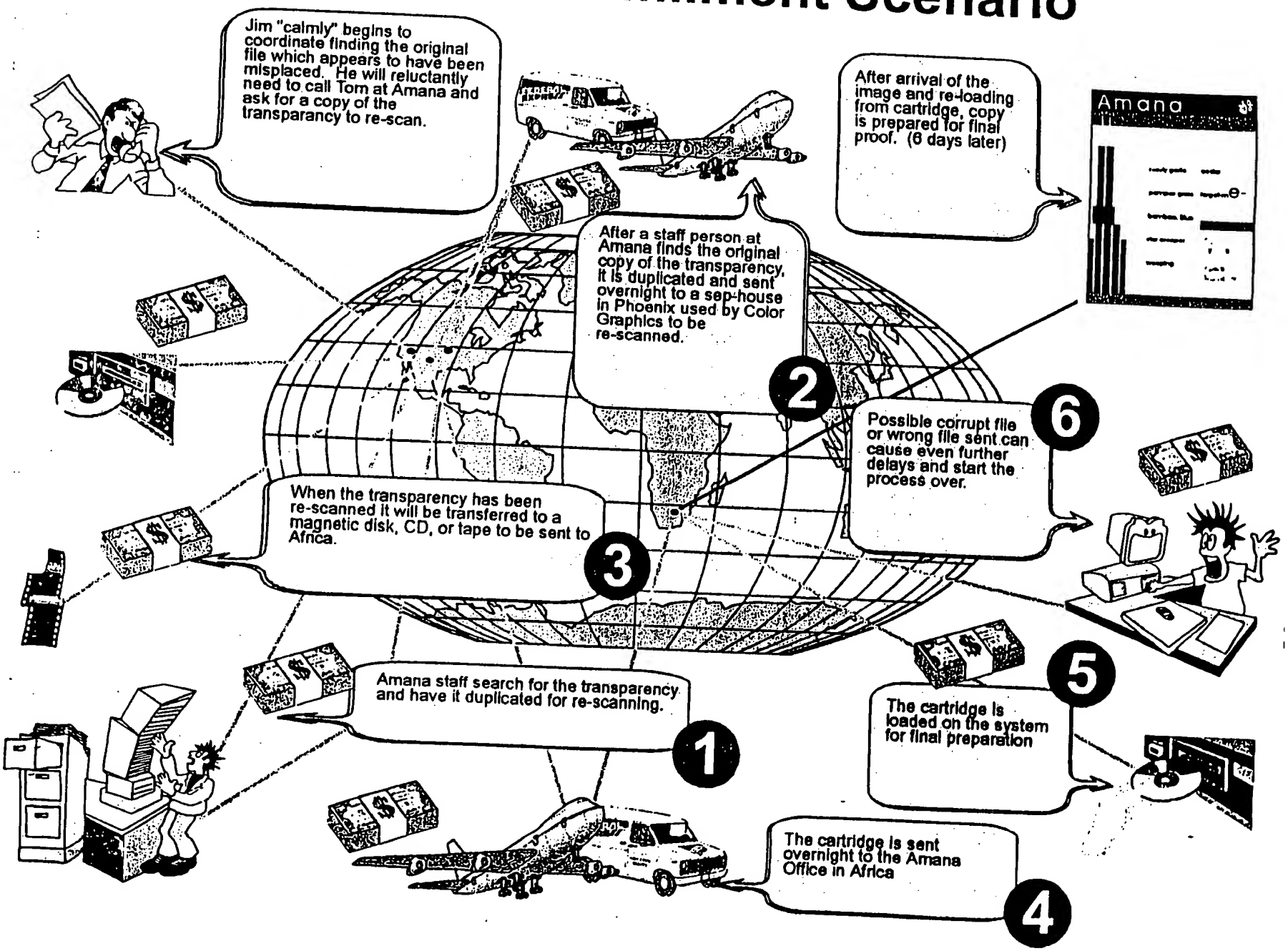
**AGT - Digital Link** product offering group - offers full pre-press and related services. I believe they have a database of their own developed in-house.

**Alaras - Tropix** image database oriented to workflow issues.

**4Sight - ISDN Manager** is a hot-foldering system. This is the leader in the market for off the shelf hot-folder hardware and software in a bundle.

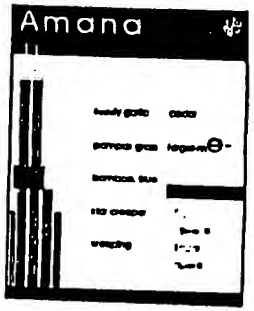
**Refer to the copy of Media Asset Management for additional info.**

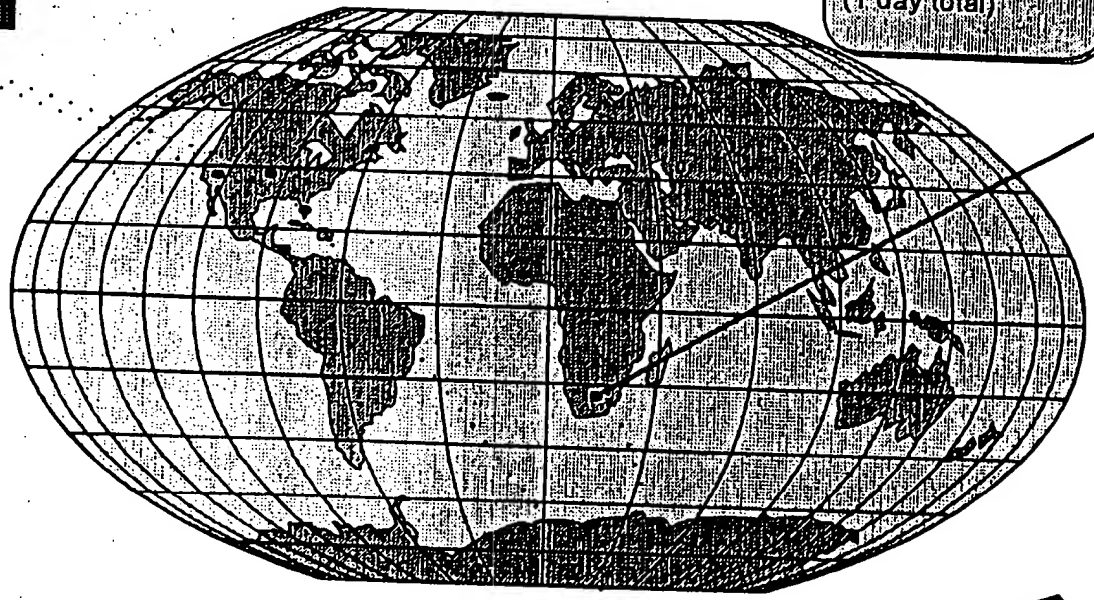
# Traditional Fulfillment Scenario

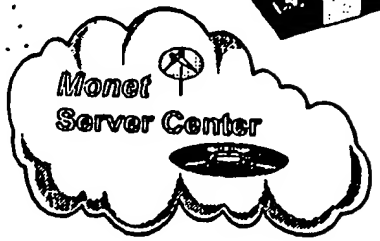


# *Monet* Fulfillment Scenario

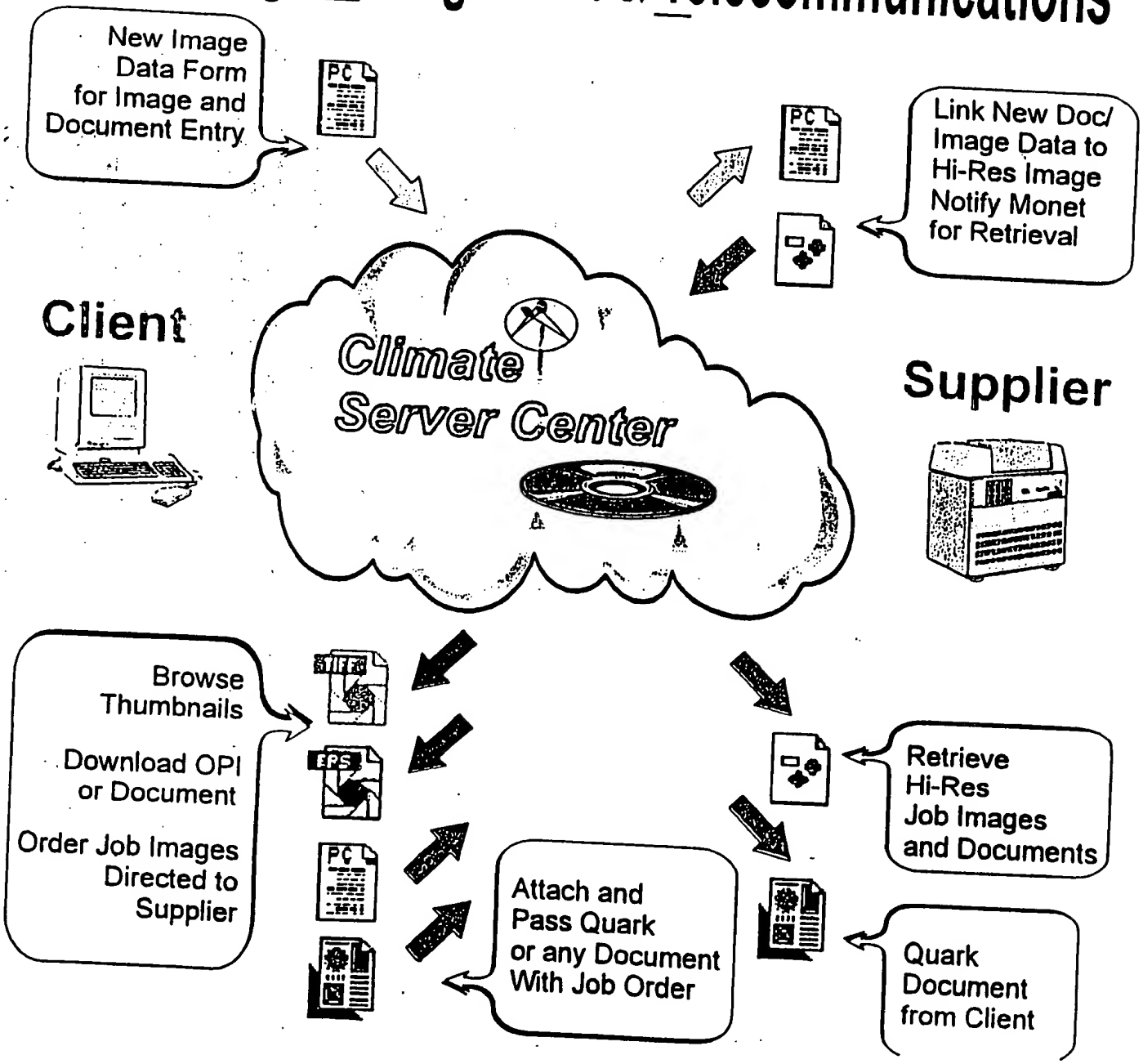
Image is delivered electronically to Amana office in Johannesburg and inserted in brochure. (1 day total)



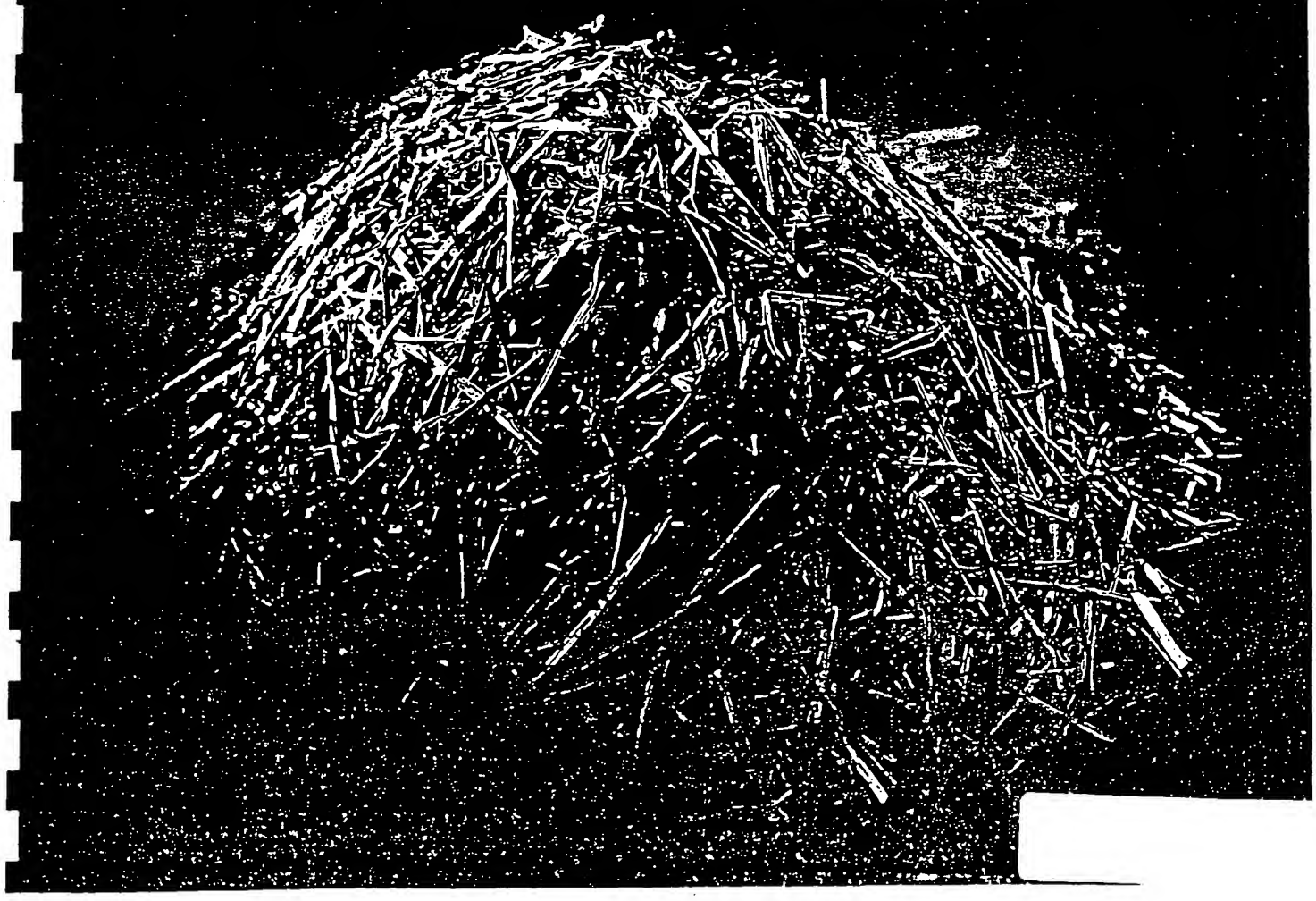





# Client Image Management & Telecommunications



# HEY! ARE YOU LOOKING FOR AN EASIER WAY TO FIND THE DIGITAL ASSETS YOU NEED–FAST?



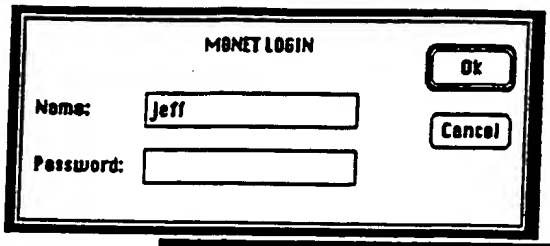
## Images or documents available anywhere, anytime, in any format.

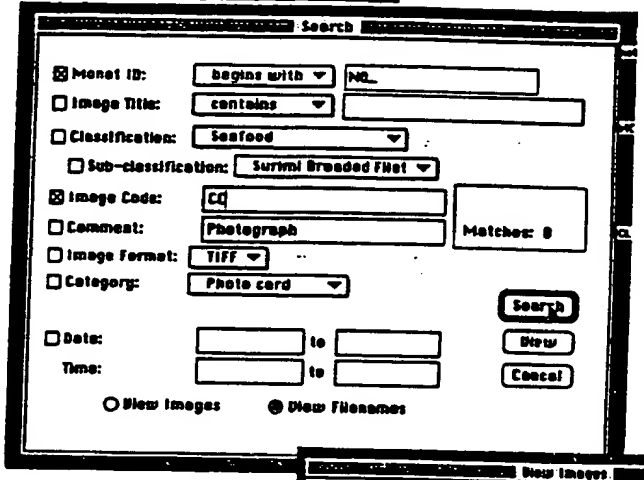
SEYBOLD
SAN FRANCISCO

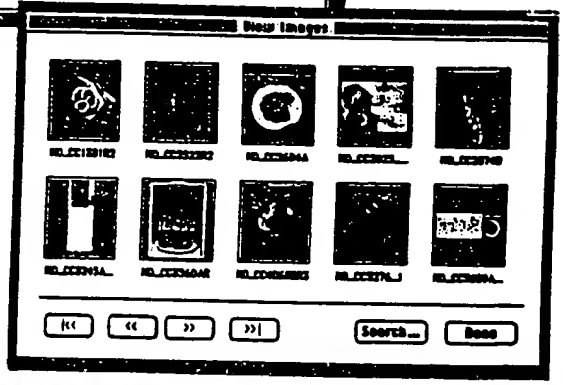
Once your images or documents are archived on the CLIMATE Network, they can be called up for browsing by anyone whom you have authorized and equipped with a phone modem. Twenty-four hour access makes it easy for designated agencies, printers, and communicators all over the world to locate the images or documents they need and to compose documents or print low resolution files for immediate use. Clients and service providers can view, browse, and print low res images, simultaneously, at multiple locations, while maintaining the consistency and security of your high resolution files.

And once your images or documents are in the system, they can easily be adapted for a wide variety of applications, such as animation, large format printing, and multimedia presentations.

All this–without the time and expense of re-shooting, re-scanning, and re-working images which have already been digitally re-touched or color corrected.

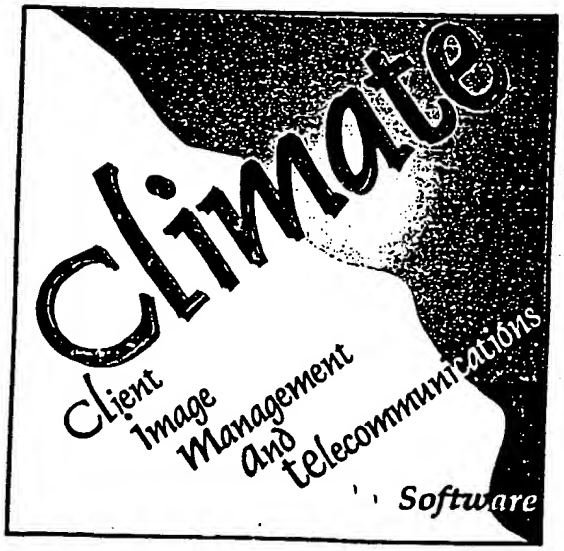



## The latest technology for a wide range of users.

CLIMATE offers a simple menu-driven interface that allows users to locate archived images or documents with key words or catalog numbers. Anyone with a CLIMATE modem, software and a regular phone line can access your library, and high volume users can access it with ISDN lines. Our advanced NT Client Server is both MAC and PC compatible, and it is designed to maintain long-term compatibility with a wide range of current and future digital file types.

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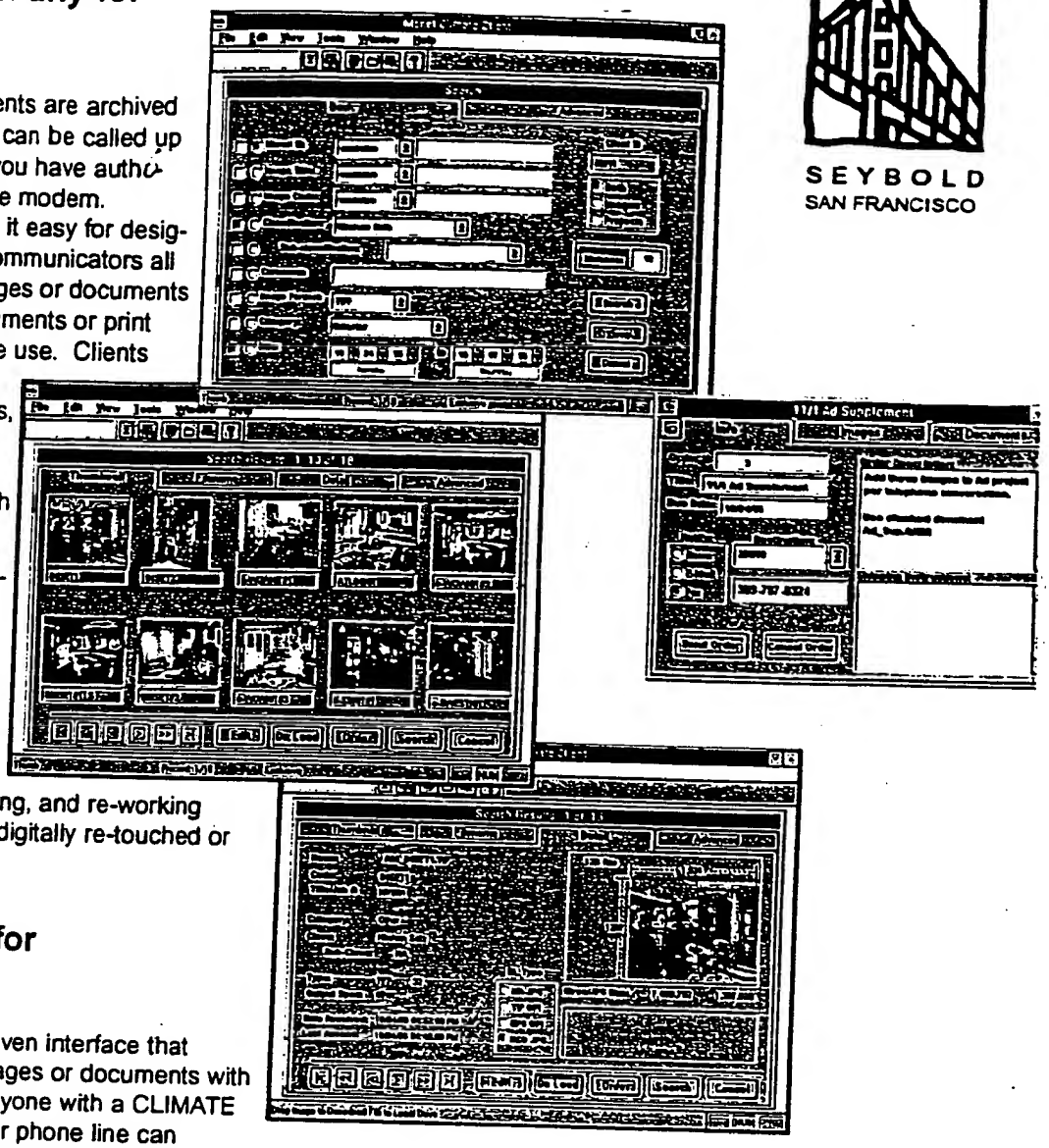
Printed on the Indigo E-Print® 1000

## Images or Documents available anywhere, anytime, in any format.

Once your images or documents are archived on the CLIMATE Network, they can be called up for browsing by anyone whom you have authorized and equipped with a phone modem. Twenty-four hour access makes it easy for designated agencies, printers, and communicators all over the world to locate the images or documents they need and to compose documents or print low resolution files for immediate use. Clients and service providers can view, browse, and print low-res images, simultaneously, at multiple locations, while maintaining the consistency and security of your high resolution files.

And once your images or documents are in the system, they can easily be adapted for a wide variety of applications, such as animation, large format printing, and multi-media presentations.

All this -- without the time and expense of re-shooting, re-scanning, and re-working images which have already been digitally re-touched or color corrected.

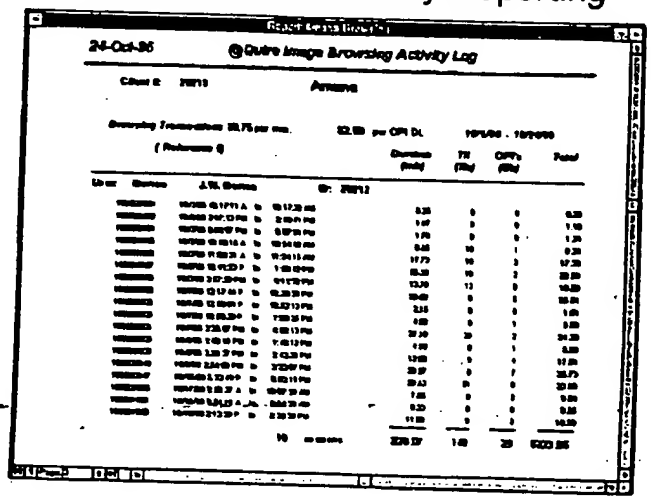


SEYBOLD
SAN FRANCISCO

## The latest technology for a wide range of users.

CLIMATE offers a simple menu-driven interface that allows users to locate archived images or documents with key words or catalog numbers. Anyone with a CLIMATE modem and software, and a regular phone line can access your library, and high volume users can access it with ISDN to T1 or ATM lines. Our advanced NT Client Server is both MAC and PC compatible, and designed to maintain long-term compatibility with a wide range of current and future digital file types.

## Management & Activity Reporting



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Printed on the Indigo E-Print® 1000 electronically using the Climate System